HMS

Remote Control of ClassA Headends

CONFIGURATION of the HMS Unit
and
CONTROL of the Headend Modules

User Manual

IKUSI

EN

Remote control of ClassA Headend Stations

User Manual

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Introduction

This Manual

This manual describes the configuration and control program embedded in «HMS» ClassA Headend Control Units. It is the second part of the user documentation for these units, the first part of which is the Installation and Access manual supplied in paper format.

Product Description

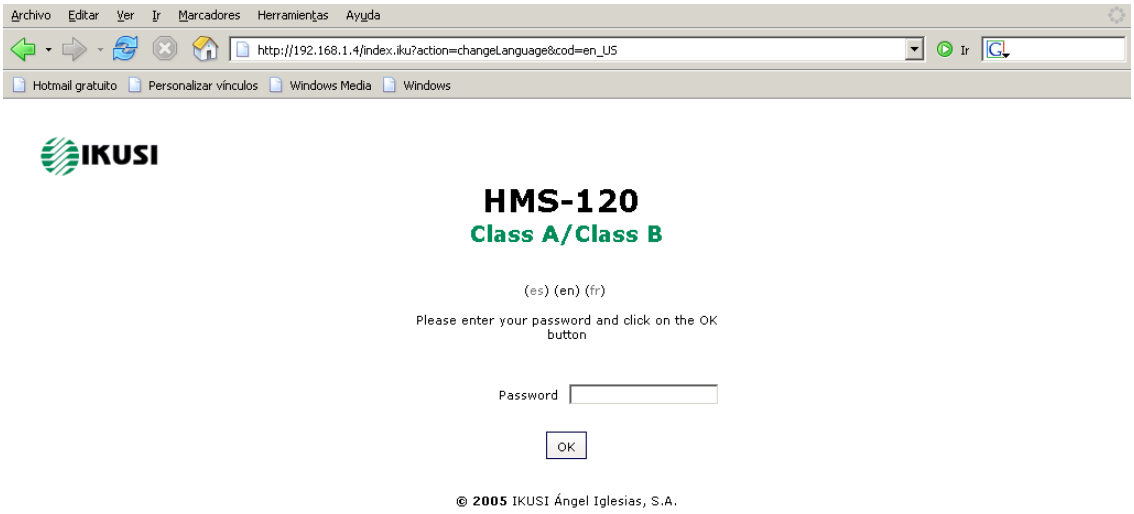
The **HMS-120** and **HMS-130** control units provide advanced remote control features for a ClassA headend. These features include sending alarms via SMS, detecting RF levels of the headend multichannel output signal, automatically equalising these levels and the possibility of scheduling parameter settings, OSD messages and firmware updates. The HMS-130, on its side, generates an INFO Channel that offers images (slides) accompanied of sound, in the form of playlists which can also be scheduled. Both HMS units include a web server which allows the control operations to be performed from any local or remote PC using a standard web browser.

Access interfaces

The HMS units have two interfaces for remote communication:

- A GSM/GPRS interface which uses an internal modem to perform control operations from any remote PC connected to the modem telephone number via a PPP connection.
- An Ethernet interface which, via an external modem/router, allows monitoring from any remote PC connected to Internet. If the headend is installed in a LAN network environment, the control operations can be performed from any PC integrated therein. The interface also allows local use of a PC connected directly to the HMS module.

When remote connection to the HMS unit is established from the control PC, the program access screen is displayed:



Program Access Screen

Once the desired program language has been chosen [Spanish (es), English (en), French (fr)], enter the password and click on *OK.*

Note: The default password — admin — can (and must) be changed as explained on page 9.

Chapter One - Configuration of the Control Unit

In this Chapter

- Configuration of General System Parameters
- Configuration of Internal GSM/GPRS Modem
- Configuration of Remote Access
- Configuration of RF Levels Monitor System
- Configuration of SMS Alarm Sending System
- Configuration of NIT
- Save/Recover Settings

Configuration of General System Parameters

Initial program screen

The first screen which appears when you access the program contains the window entitled "Headend status overview", which provides full information about the current configuration and status of all of the headend modules interconnected with the HMS unit via the IKUSUP bus.

On the left of the screen are the menus that access all of the program's functions.

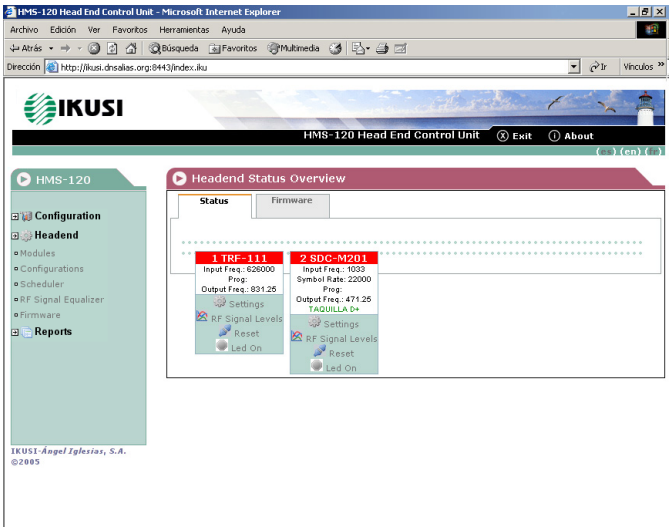


Figure 1.1 - Program initial screen

Click on the **Configuration** menu on the left of the screen to display a dropdown list containing the 7 options: *System, Modem, Remote Access, RF Level Monitor, Alarms, NIT and Save/Recover*.

Click on *System.* The Configuration of General System Parameters window is displayed:

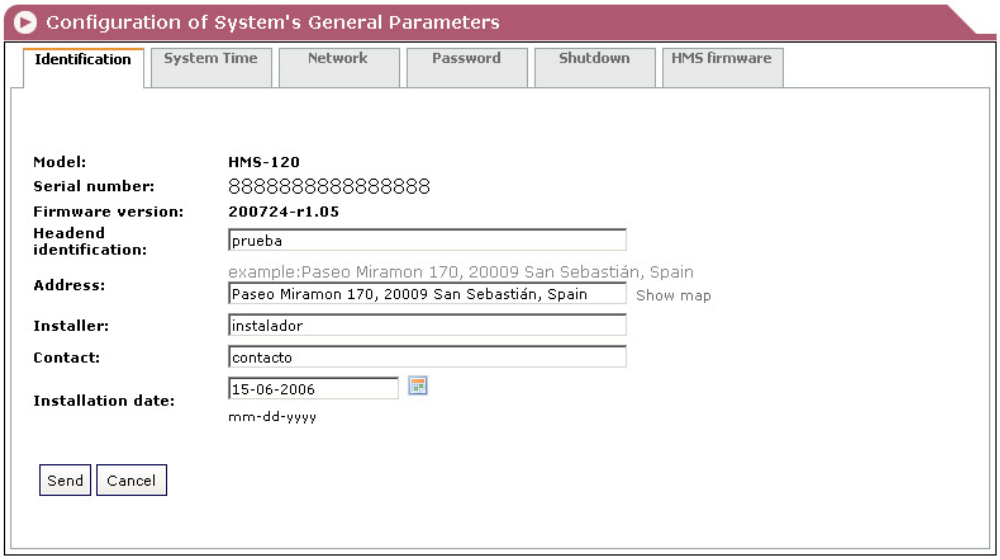


Figure 1.2 - Identification card of the Config. of General System Parameters window

Identification

The Identification card (Figure 1.2) contains basic identification data for both the control unit and the headend station. The various fields of the card are filled in as follows:

"Model": This shows the name of the control unit installed in the headend: HMS-120 or HMS-130. Obviously, this information cannot be changed.

"Serial Number": For the installed HMS unit. This cannot be changed either.

"Firmware Version": For the installed HMS unit. Ditto.

"Headend Identification": Any name that the installer or operator wants to assign to the headend station can be entered here.

"Address": Enter the postcode of the installation site if desired. If the control PC is connected to the Internet at the time, click on *Show map* to view a map showing the site.

"Installer": You can enter the installer's identification data.

"Contact": Again, enter their contact details (telephone number, email).

"Installation date": Here you can enter the headend start-up date.

Once you have entered the information, click on *Send* at the bottom of the window to store them in the HMS unit. If, at the last moment, you decide not to change the existing information, click on *Cancel*.

System time

Click on the System Time tab. The following card is displayed:

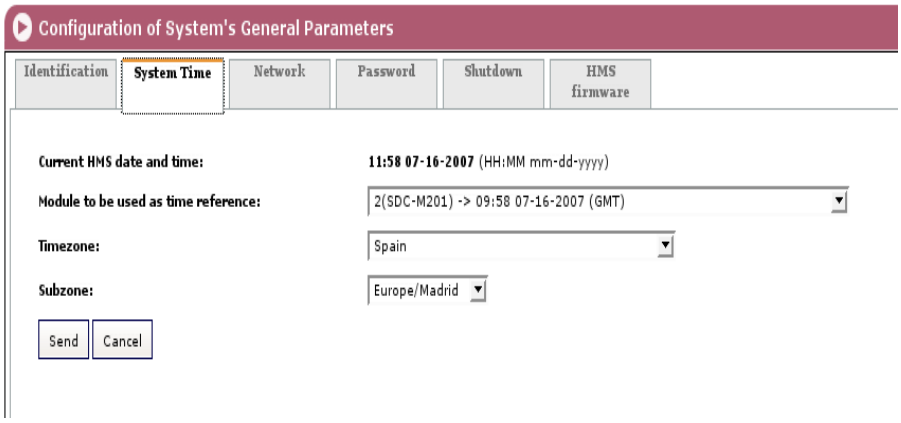


Figure 1.3 - System Time card of the Config. of General System Parameters window

"Module to be used as time reference" : Select the headend module which will provide the date and time that the HMS unit will use as the reference for all control operations. (The date and time given by each of the modules are taken from their reception signals).

"Time zone" : Click on the dropdown list and select the timezone of the installation site.

"Subzone" : Select the subzone.

Once you have done the three selections, click on the *Send* button so that the HMS unit adopt the new time reference. If, at the last moment, you decide to keep the previous one, click on *Cancel*.

Network

If you want to configure the Ethernet network connection parameters of the HMS unit, click on the Network tab. The following card is displayed (Figure 1.4).

Note

This card will only be filled in if the headend station is integrated in a local Ethernet network.

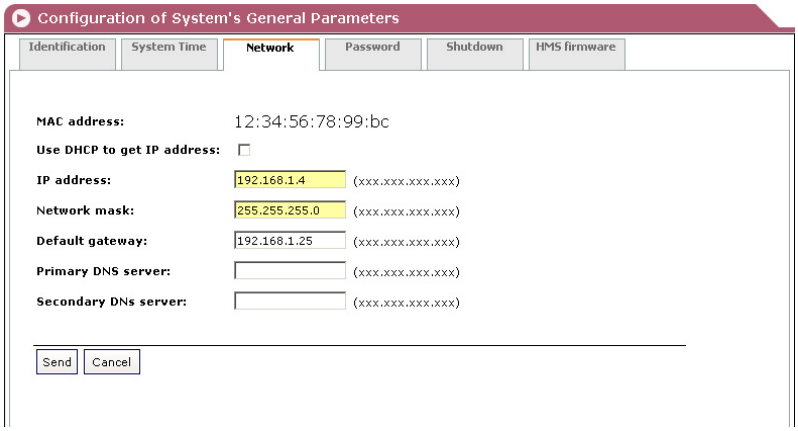


Figure 1.4 - Network card of the Configuration of General System Parameters window

"MAC Address": The physical address of the HMS unit network card is displayed automatically.

"Use DHCP to get IP address": If this box is ticked, the HMS unit will use the DHCP protocol for assigning dynamic IP addresses. Consequently, no data needs to be entered in the next five fields on the tab.
If the administrator of the network in which the headend is installed assigns static IP addresses, the box will not be ticked and the fields will need to be filled in.
ATTENTION; If this option is activated, you will only be able to know the IP address assigned to the HMS unit by consulting the management system of the DHCP server.

"IP Address": Enter the IP address that you want to assign to the HMS unit. This address must fall within the range of local network addresses.

"Network mask": Enter the local network mask.

"Default gateway": Enter the IP address of this gateway.

"Primary DNS server": Enter the server's IP address. This information is only required if you want the HMS unit to access Internet.

"Secondary DNS server": Enter the server's IP address. As above, this information is only required if you want the HMS unit to access Internet.

Once you have filled in all of the required information, click on *Send*. If, at the last moment, you decide to keep the previous data, click on *Cancel*.

Password

If you want to change the current program password, click on the Password tab. The following card is displayed:

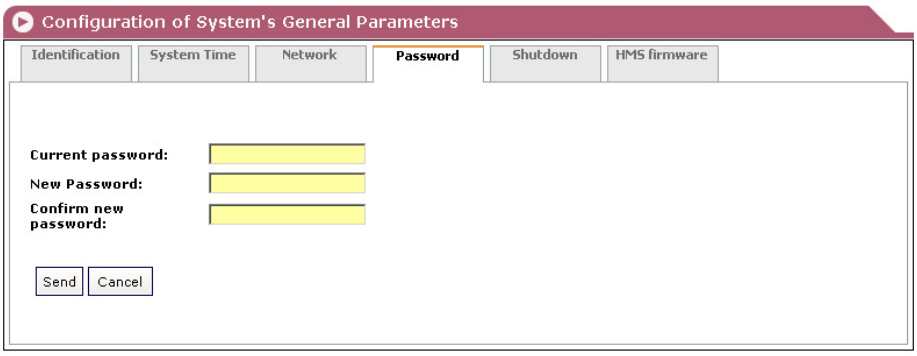


Figure 1.5 - Password card of the Config. of General System Parameters window

"Current password": Enter the current password.

"New password": Enter the new password which will be required to access the program the next time.

"Confirm new password": Re-enter the new password.

Once you have entered the required information, click on *Send* so that the HMS adopts the new access password. If, at the last moment, you decide to keep the previous password, click on *Cancel*.

Note

If you do not know the old password, i.e. the password used to access the current monitor session, you must perform a Password Reset as explained in Section 1 of the Installation and Access manual. Following this reset, the program password will be the default password: admin.

IMPORTANT: When you perform a password reset, the IP address assigned to the unit on the Network card (previous page) automatically changes to the default one: http://192.168.1.4.

Shutdown

If you need to reboot the control unit for any reason, click on the Shutdown tab. The following card is displayed:

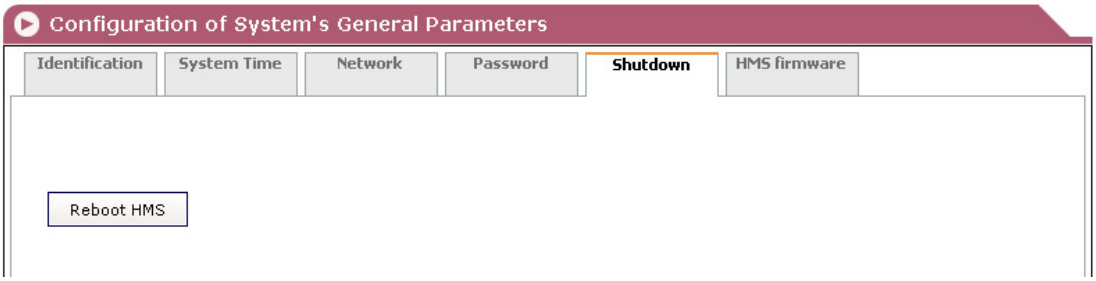


Figure 1.6 - Shutdown card of the Config. of General System Parameters window

Click on *Reboot HMS*. The program's initial screen is displayed (Figure 1.1, pag. 6).

HMS Firmware

If you want to update the control unit firmware, click on the HMS Firmware tab. The card of Figure 1.7 is displayed. It shows at the top the firmware version installed in the control unit at the present time.

(The firmware is software stored in the module which is responsible for its basic operation).

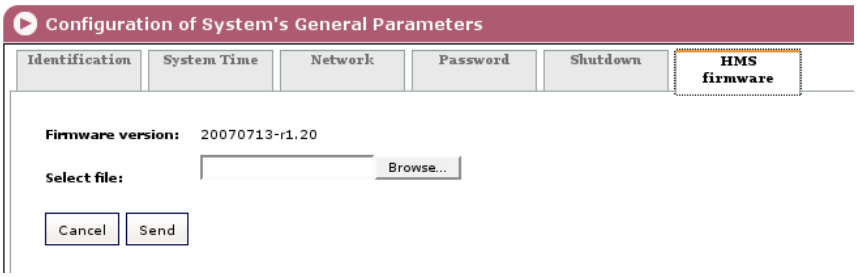


Figure 1.7 - HMS Firmware card of the Config. of General System Parameters window

WARNING: The firmware update file will have been previously stored on the PC hard drive. (You can download it from http://www.ikusi.com).

Click on *Browse...* and select the firmware file available for updating on the hard drive. When the name appears in the box, click on *Send*. The new firmware will be installed in the HMS unit. If, at the last moment, you decide to not to update, click on *Cancel*.

GSM Modem Settings

Click on the **Configuration** menu on the left of the general program screen and click again on the *Modem* option. The GSM Modem Settings window is displayed:

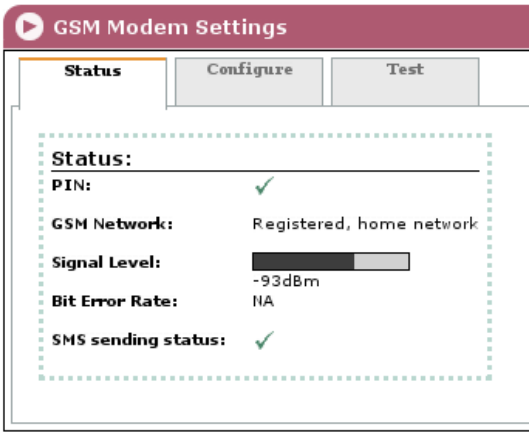


Figure 1.8 - Status card of the GSM Modem Settings window

As well as accessing the control unit via GSM, the internal modem can send SMS alarm messages and various information.

Status

The Status card (Figure 1.8) provides the following information:

"PIN": A tick means that the modem has stored the PIN (personal identification number) previously entered from the Configure tab (see next page).

"GSM Network": This specifies whether the modem is or is not registered in a GSM network.

"Signal level": Shows the GSM signal level.

"Bit Error Rate": Shows the BER.

"SMS sending status": A tick means that the SMS sending service is working properly.

Note

The HMS unit must have the modem's SIM card installed and the supplied GSM aerial connected. Please refer to the Installation and Access manual.

Configure

So that the GSM modem is activated each time the monitor program boots, the HMS unit must have stored the PIN for the inserted SIM card (subscriber identity module). Click on the Configure tab. The following card is displayed:

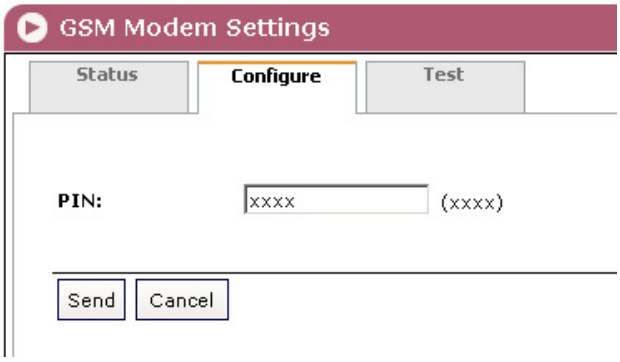


Figure 1.9 - Configure card of the GSM Modem Settings window

"PIN": Enter the PIN for the SIM card.

Next, click on *Send* so that the PIN entered is stored in the HMS unit. If, at the last moment, you decide not to change the previous PIN, click on *Cancel*.

Test

In order to test SMS sending by the HMS unit, click on the Test tab. The following card is displayed:

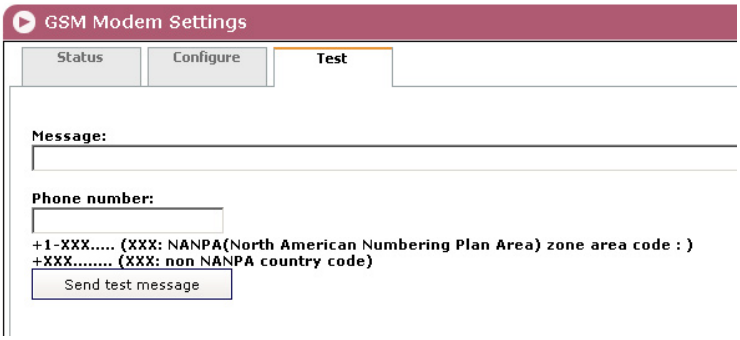


Figure 1.10 - Test card of the GSM Modem Settings window

"Message": Enter the text of the test SMS.

"Telephone number": Enter the telephone number that will receive the message (this number must include the country dialling code: +34 Spain, +33 France, etc.).

Once you have filled in all of the required information, click on *Send test message*. The program automatically goes back to the Status tab (Figure 1.8, previous page), where a message is displayed at the top announcing that the telephone will receive the message shortly. If the message does not arrive within 2 minutes, check on the last line of the tab to see whether an SMS sending error has occurred.

Configuration of Remote Access to HMS

Click on the **Configuration** menu on the left of the general program screen and click again on the *Remote Access* option. The Configuration of Remote Access to HMS window is displayed :

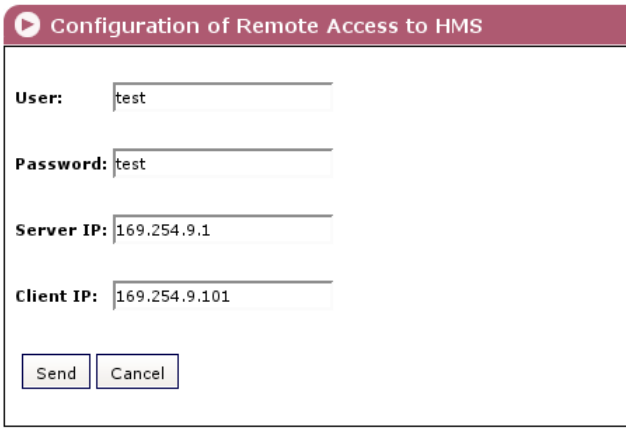


Figure 1.11 - Configuration of Remote Access to HMS window

The HMS control unit has a PPP (Point-to-Point Protocol) server function. In this window enter the data necessary for, first, establishing the remote connection via GSM, and next, for accessing the unit (see "Establishing remote connection" in section 2 of the Installation and Access manual).

"Username": Enter the name that must be entered in the field with the same name ("Username") when the *Telephone access to networks* application of the remote control PC is configured. The default name is "test".

"Password": Enter the password that must be entered in the field with the same name ("Password") when the *Telephone access to networks* application of the remote control PC is configured. The default password is "test".

"Server IP": The displayed address is the one that the control unit has currently assigned when is acceded via GSM (the default address is 169.254.9.1). This address can be changed

"Client IP": Idem that of the device used to establish the connection (modem, PDA, cellular, etc.). This default address is 169.254.9.101 and may be changed too.

Note

To prevent that people knowing the equipment can accede it via the *telephone access to networks* application, it is advisable to change the default name and password keys ("test").

Note

The subnet sections of the server and client IP addresses have to be equal (mask 255.255.255.0). Take it into account if you opt for changing one or the two addresses.

Once you have filled in the information, click on *Send*. If, at the last moment, you decide to keep the previous username and password, click on *Cancel*.

Configuration of RF Level Monitor

Click on the **Configuration** menu on the left of the general program screen and click again on the *Signal Level Monitor* option. The Configuration of Signal Level Monitor window is displayed:

Figure 1.12 - Status card of the Configuration of Signal Level Monitor window

An important function of the HMS unit is RF level monitoring. The unit provides the signal levels of each channel at both the loop-through input and output of the headend station.

Status

The Status card (Figure 1.12) provides a summary of the level monitor built into the control unit. An important feature of this information is the internal temperature of the unit.

"Model": The name assigned to the level monitor built into the unit is given.

"Firmware Version": The firmware version of this model.

"Hardware": A tick means that the hardware works properly.

"Temperature": The internal temperature of the control unit.

Configuration

The control unit provides the multichannel output signal level of the station based on a sample signal connected to the RF IN port of the unit. Click on the Configure tab. The following card is displayed:

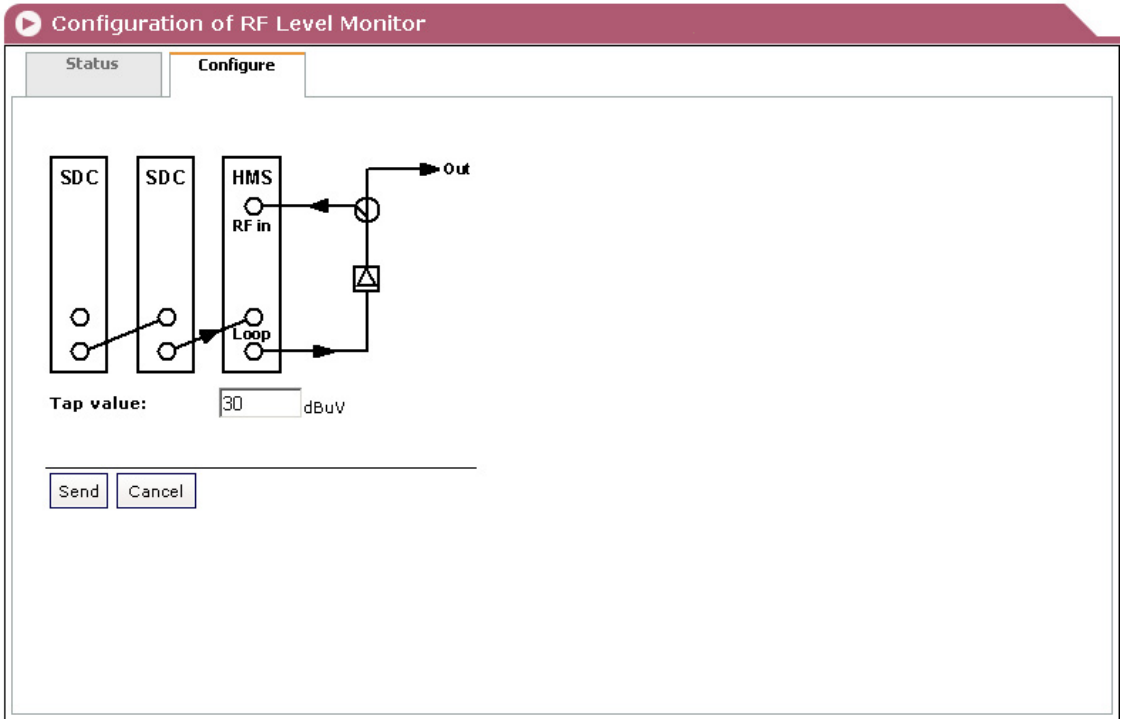


Figure 1.13 - Configure card of the Configuration of Signal Level Monitor window

"Tap value": Enter the value in dB of the tap attenuation presented by the device providing the sample signal.

Once you have entered the information, click on *Send*. If you do not want to change the current tap value, click on *Cancel*.

Note

A ClassA station always includes an RF power amplifier, the output of which is the station's own. Although an external amplifier can be used, an HPA module from the ClassA family is usually used. HPA modules have a -30 dB output test port which can be connected to the RF IN port of the control unit. The test signal is used as well as the sample signal for the signal monitor. (Please refer to the Installation and Access manual).

Configuration of Alarm Sending via SMS

Click on the **Configuration** menu on the left of the general program screen and click again on the *Alarms* option. The Configuration of Alarm Sending via SMS window is displayed:

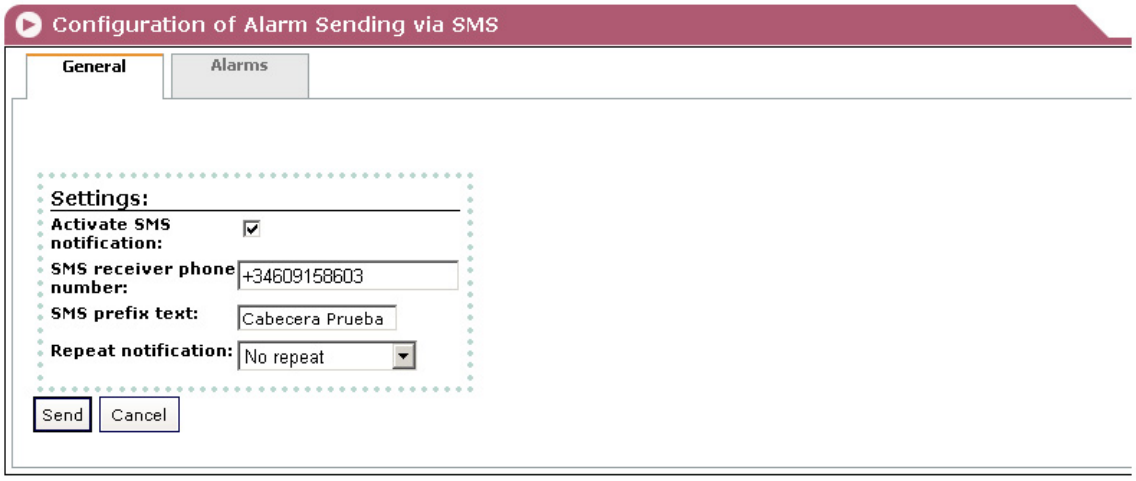


Figure 1.14 - General card of the Configuration of Alarm Sending via SMS window

The HMS unit continuously monitors a series of station operating parameters. If any value falls outside the set operating limits, the unit automatically sends an alarm SMS to a specific telephone.

General

The General card (Figure 1.14) has four fields:

"Activate SMS notification": Tick the box if you want to activate the sending service.

"SMS receiver phone number": Enter the phone number that will receive the alarm messages. The number must include the country dialling code.

"SMS prefix text": If you want the message to include a prefix to identify the message easily, enter it here.

"Repeat notification": The HMS can repeat a notification until the cause of the alarm has been solved. Click on the dropdown list and select the repeat frequency.

Once you have filled in the various fields, click on *Send*. If, at the last moment, you decide to keep the previous settings, click on *Cancel*.

Alarms

Alarm messages are related to several elements and parameters of the station modules and headend. Click on the Alarms tab. The following card is displayed:

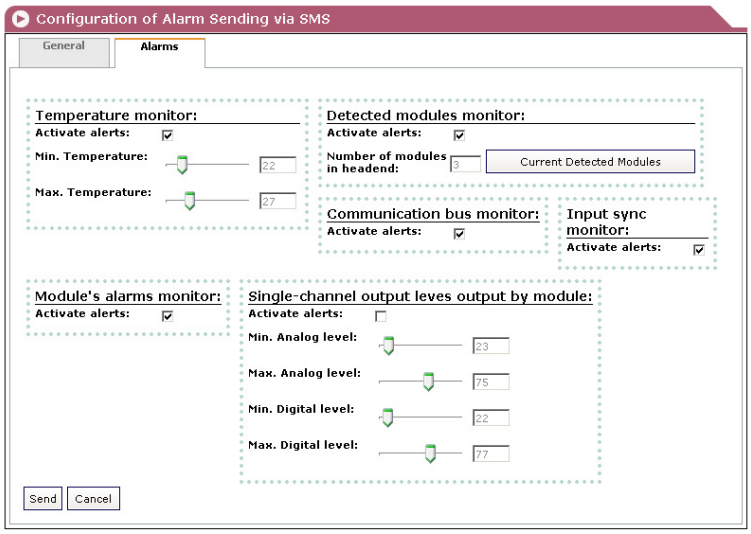


Figure 1.15 - Alarms card of the Configuration of Alarm Sending via SMS window

The card shows six sections that refer to other parameters that the control unit can monitor to send SMS alarm messages:

"Temperature monitor": Tick the box if you want the unit to send an SMS when its internal temperature exceeds the minimum and maximum limits established in the two boxes in this section. For information purposes, this internal temperature is 7(±2) ººC above room temperature.

"Detected Modules Monitor": Tick the box if you want the unit to send an SMS when the number of detected modules is different to the one entered in the box underneath. This alarm indicates breakdown or theft. (The number of modules always refers to the modules interconnected via the IKUSUP bus, without including the HMS unit).

"Communication Bus Control": Tick the box if you want the unit to send an SMS when the error rate in the IKUSUP bus traffic suggests that there is a fault in the headend station.

"Input Sync Monitor": Tick the box if you want the unit to send an SMS when there is a loss of synchronism with the input signal in any of the headend modules.

"Module's Alarms Monitor": Tick the box if you want the unit to send an SMS when any of the module alarms is activated.

"Single Channel Output Levels": Tick the box if you want the unit to send an SMS when the output level of any station channel is outside the limits established in the boxes underneath.

Once you have checked the boxes, click on *Send*. If you do not want to change the previous settings, click on *Cancel*.

Configuration of NIT

Click on the **Configuration** menu on the left of the general program screen and click again on the *NIT* option. The Configuration of NIT window is displayed:

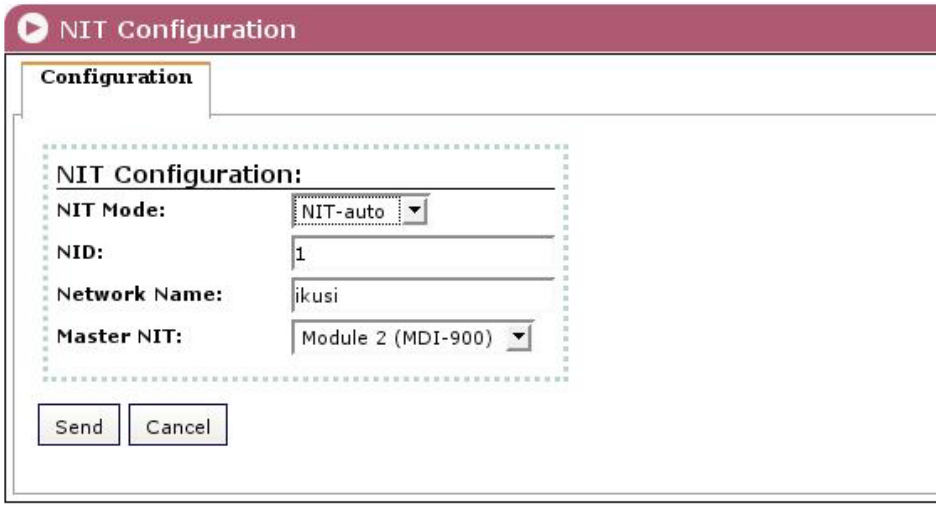


Figure 1.16 - Configuration of NIT window

The Configuration of NIT window applies to headends with digital transmodulator modules. It is used to regenerate and/or to store in the HMS unit a particular NIT and to give a name to the new network that comes out when adapting the NITs of the transmodulators of the headend.

Configuration of NIT

"NIT mode" : The pick list offers 3 stored-NIT options :

- NIT-auto : The master NIT selected through the "Master NIT" option down here is regenerated in an automatic way to a new NIT that contains, amongs other parameters, the output frequencies of the transmodulators of the headend. This regenerated NIT is stored in the HMS unit, and is updated as either the master NIT or the headend parameters change.
- NIT-fixed : The NIT currently stored in the HMS unit stays locked, unaware of both the input NITs and the headend's setting changes.
- NIT-off : No NIT is stored. If one is currently stored, it is erased.

"NID" : Network IDentifier. Enter the identification number desired for the new network that comes out when adapting the NITs of the transmodulators of the headend. (If you enter the number "0", both the NID and the name of the output network will be the same as those of the input network).

"Network name" : Enter here the name desired for the new network.

"Master NIT" : Click on the dropdown list and select the transmodulator module whose input NIT will be considered by the HMS unit as reference or "master" when choosing the NIT-auto option.

Once you have filled in all the fields of the window, click on *Send*. If, at the last moment, you decide to keep the previous configuration, click on *Cancel*.

Save/Recover System Settings

All of the information entered in the control unit via the 6 Configuration menu options (*System, Modem, Remote Access, RF Level Monitor, Alarms* and *NIT*) can be saved on a backup file. Inversely, the settings information saved on a file can also be recovered in the HMS unit.

Click on the **Configuration** menu on the left of the general program screen and click again on the *Save/Recover System Settings* option. The Save/Recover System Settings window is displayed:

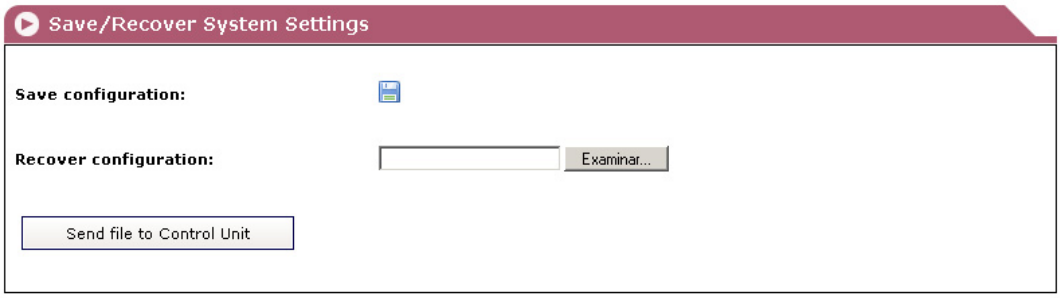


Figure 1.17 - Save/Recover System Settings window

Save/Recover System Settings

"Save configuration": Click on the icon to the right. A window is displayed which allows you to select the destination folder for the data file of the current global settings of the control unit.

"Recover Configuration": Click on *Browse...* The Windows explorer window is displayed in which you must select the file containing the settings data that you want to recover in the control unit.

Once you have selected the file — the name will appear in the box on the right —, click on *Send*. The Load Confirmation window is displayed (Figure 1.18). Click on *OK*.

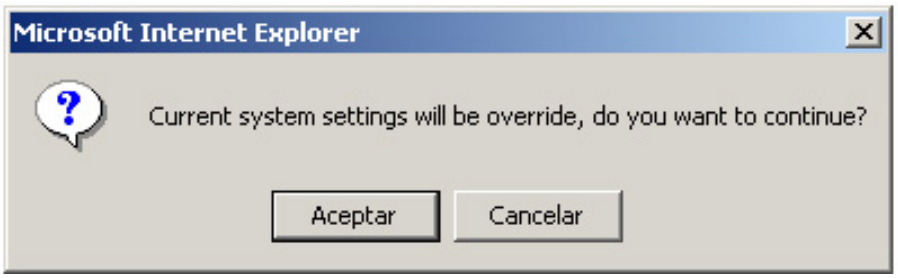


Figure 1.18 - Load Confirmation Window

Chapter Two - Module Monitor

In this Chapter

- Monitoring and Adjustment
- Module Configurations
- OSD Configurations
- Module Scheduler
- OSD Scheduler
- RF Signal Levels — Monitor and Equalisation
- Firmware — Updates — Scheduler
- INFO channel (exclusively for HMS-130)

Controlling the Headend Modules

The HMS unit allows all of the headend modules that are interconnected to it to be controlled remotely via the IKUSUP communications bus. Click on the **Headend** menu on the left of the general program screen to display a dropdown list containing the following 5 or 6 options: *Modules, Configurations, Scheduler, RF Signal Equalizer, Firmware* and, only for HMS-130, *INFO Channel*.

Click on *Modules.* The Headend Status Overview window is displayed:

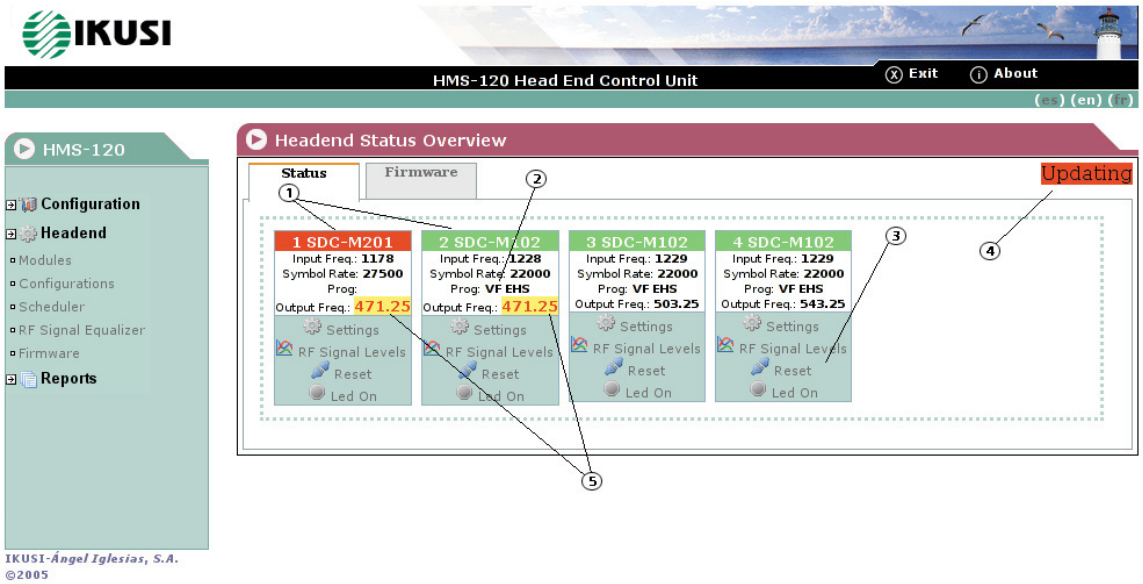


Figure 2.1 - Headend Status Overview window

This window shows the main adjustment and selection parameters for each of the headend modules and states whether there are any problems in them. In order to provide a better description of the various components, identification numbers have been used (Figure 2.1):

① The headend modules are represented by rectangles with a strip at the top which shows the module's order number in the IKUSUP bus and the module name. The strip is Green if the module is working properly or Red if it is in an alarm status.

② The middle strip of the rectangle shows the values of the four important module parameters.

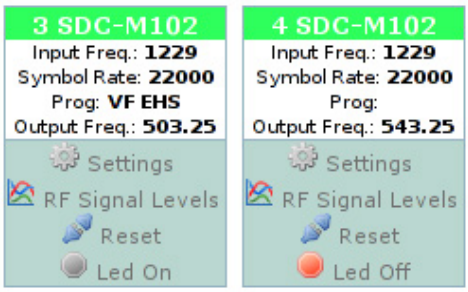
③ The bottom strip contains the 4 actions that can be carried out on each module through this window:

Settings. When this action is selected, the Parameters Control Module # window is displayed (see next page), through which all of the module parameter settings can be consulted and changed and information about its status can be retrieved.

Levels. When this action is selected, the RF Signal Levels window is displayed (see page 44), which shows the RF levels of each channel at both the loop-through input and the headend station output. The window also allows you to equalise the RF bandwidth level of any of these signals or, more specifically, run a multi-module AGC so that each single channel level stays within set limits.

Reset. When this action is selected, a reset order is sent to the module which changes all of the adjustment and selection parameters to the default ones.

LED on / LED off. This shows whether the red STATUS led on the front panel of the module is on or off. When this action is selected, the led switches on or off, making it easier to identify the module in the headend.



④ Red bar showing the automatic updating of all the information displayed in the window. The update takes place every 10 seconds.

⑤ Incompatible data. When two or more modules have a same output channel frequency established, the number is shown in red on a yellow background.

Modules — Parameters Control

When you click on the Settings action in the rectangle representing a specific module in the Headend Status Overview window, the Parameters Control Module # (windows is displayed (Figure 2.2). From the five tabs in this window you can consult and **change** all of the settings and selections of the chosen module.

Settings

Click on the Settings tab. The following card is displayed:

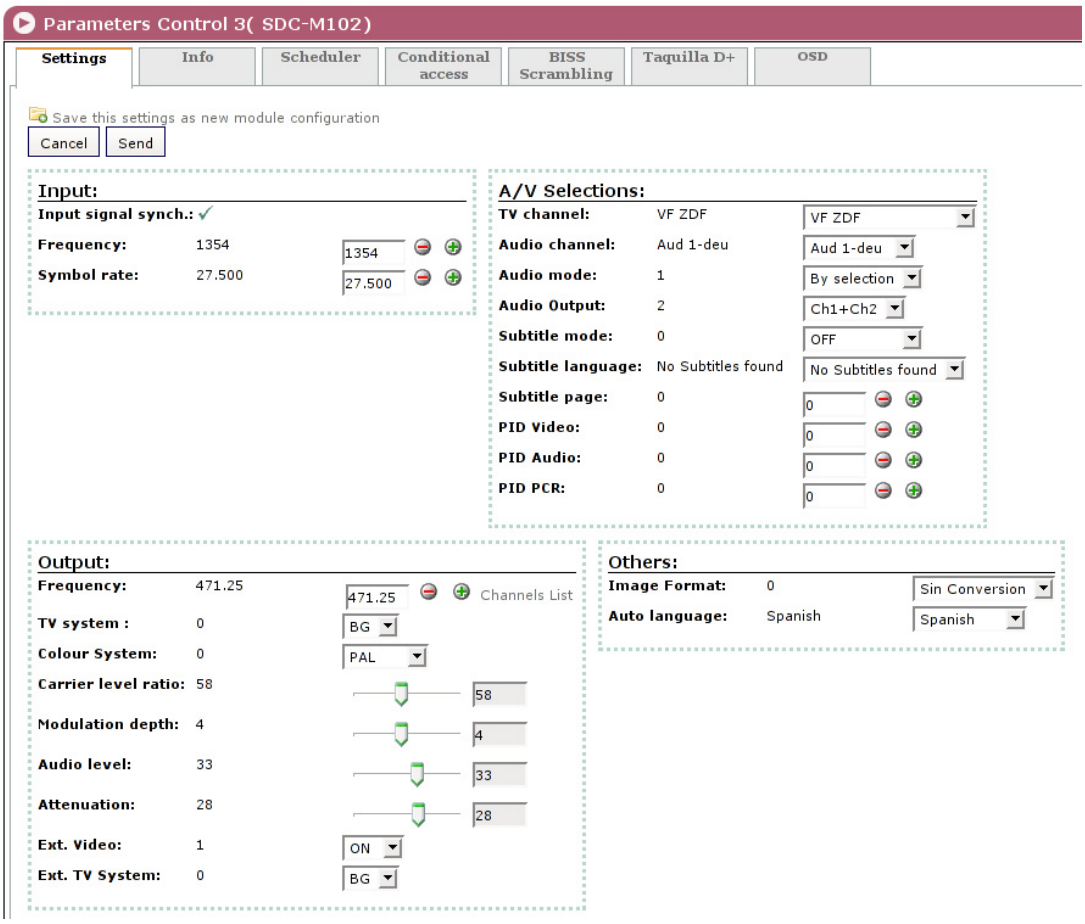


Figure 2.2 - Settings card of the Module's Parameters Control window

The card shows the parameter values related to four specific module sections: **Input**, **V/A Selections**, **Output** and **Others**.

The process to change a parameter value or selection is simple. The following explains how to change the module input frequency, the current value of which is 1354 MHz.

Note

The figures shown on this page and the following refer to an SDC-M102 module. The tab for other models is similar, and at any rate it is structured in the same way as local programming with the SPI-300 command. Therefore, **you are recommended** to keep a copy of the Basic Operation manual at hand, as well as the module Programming Guides. You can download these from http://www.ikusi.com.

When the module is a digital transmodulator with TS Processing, the Settings card has a special section ("NIT") which is explained on page 25.

Enter the new value desired for the input frequency in the relevant box. The line is highlighted in red. You will also notice that the frames of the selection boxes in the **V/A Selections** section on the right disappear (Figure 2-3).

Once you have changed the input frequency (and other parameters if required), click on *Send* (there are two on the card, one at the top and one at the bottom) so that the change is applied in the module. Once you have clicked this, a message appears at the top of the tab stating that the changes are being sent (Figure 2-4). When the module in question has received the changes, the sending message disappears, as does the red highlight of the changed parameters. The selection boxes in the V/A Selections section reappear. You must now select the desired video and audio services for the input channel. Another sending message should appear when you click on *Send*.

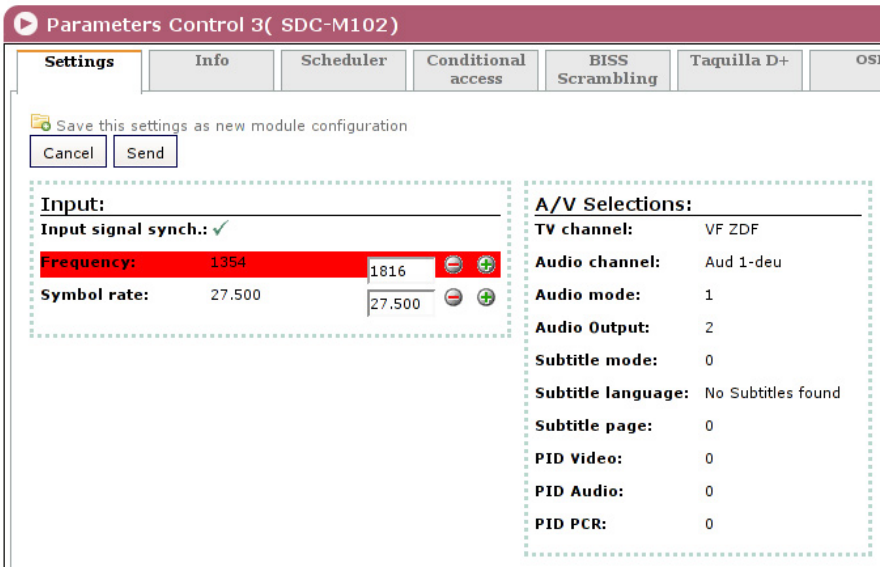


Figure 2.3 - Settings — Parameter change card

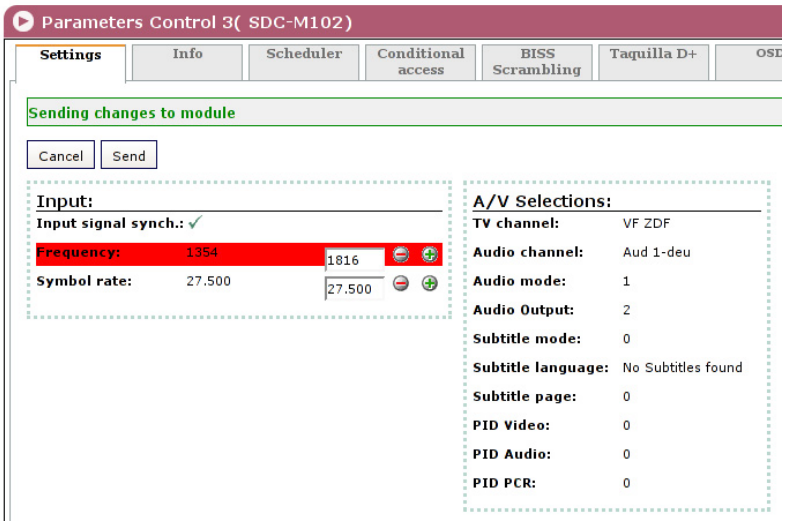


Figure 2.4 - Settings — Sending changes card

Note about the Settings card for the digital transmodulator modules

The Settings card for the digital transmodulator modules has three sections: Input, Output and NIT. The options of the last, NIT, are explained below.

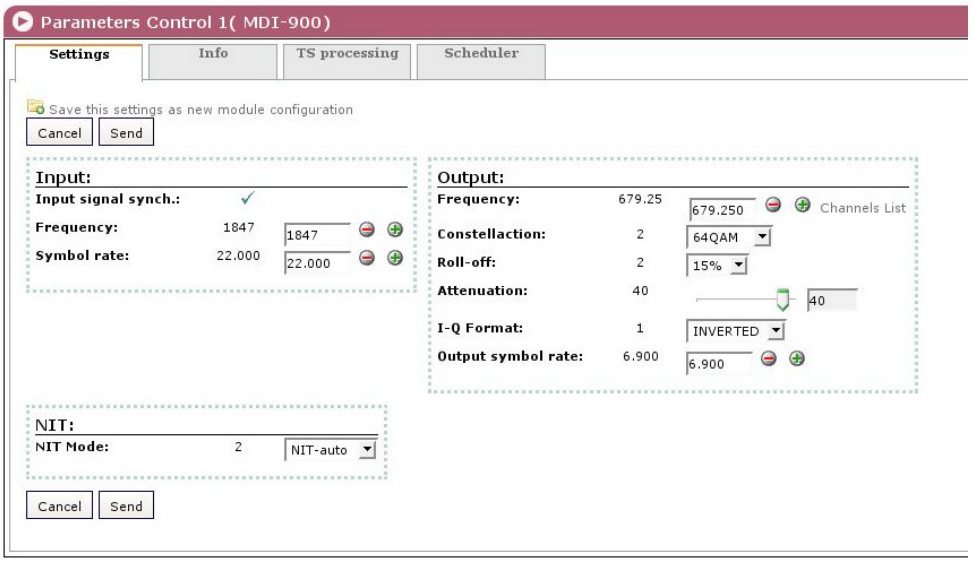


Figure 2.5 - Settings card of the MDI-900 transmodulator

"NIT" :

- NIT Mode :

  The dropdown list has 3 options:

  - NIT-auto : The NIT of the transmodulator module is at any time the same as the one stored currently in the HMS control unit.
  - NIT-fixed : The current NIT of the transmodulator module stays locked, unaware of any change of either its input NIT or the NIT stored in the HMS unit.
  - NIT-pass : The output NIT is at any time the same as the input NIT. Any NIT stored in the module is erased.

Info

Click on the Info tab. The following card is displayed:

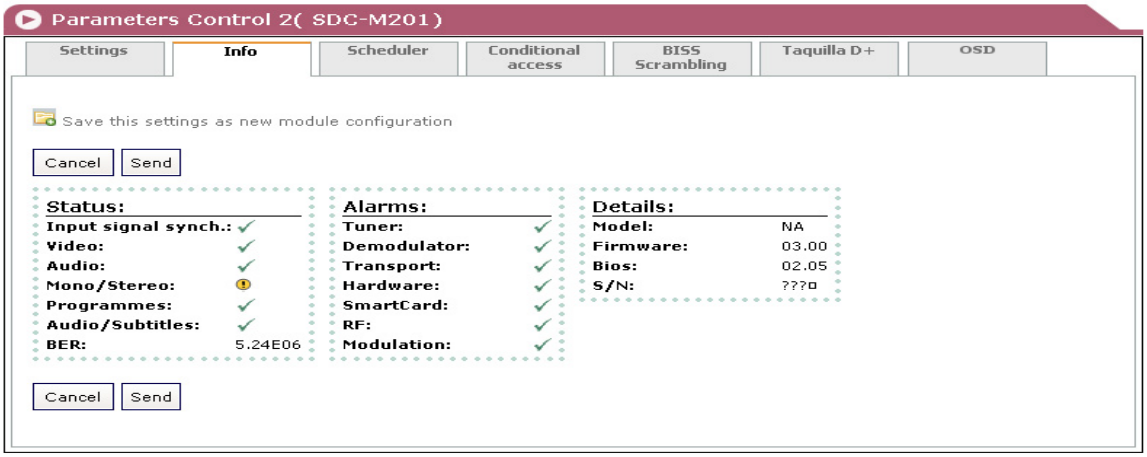


Figure 2.6 - Info card of the Module's Parameters Control window

This card contains three sections — **Status**, **Alarms** and **Details** — which provide information about the module. The data displayed is updated every 10 seconds, as mentioned earlier.

Scheduler

Click on the Scheduler tab. The following card is displayed:

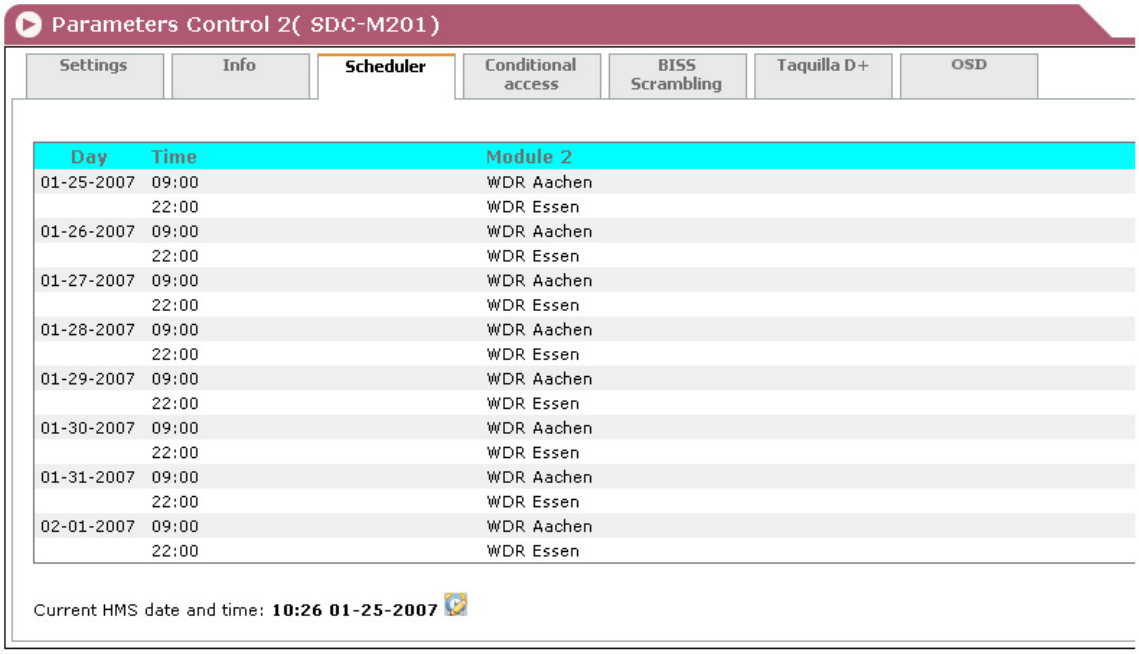


Figure 2.7 - Scheduler card of the Module's Parameters Control window

This card shows the adjustment changes scheduled for the next 7 days (see Scheduler on pages 33 to 39).

Transport Stream Processing

The TS Processing tab only appears for digital transmodulator modules with TS processing function. When you click on this, the following card is displayed:

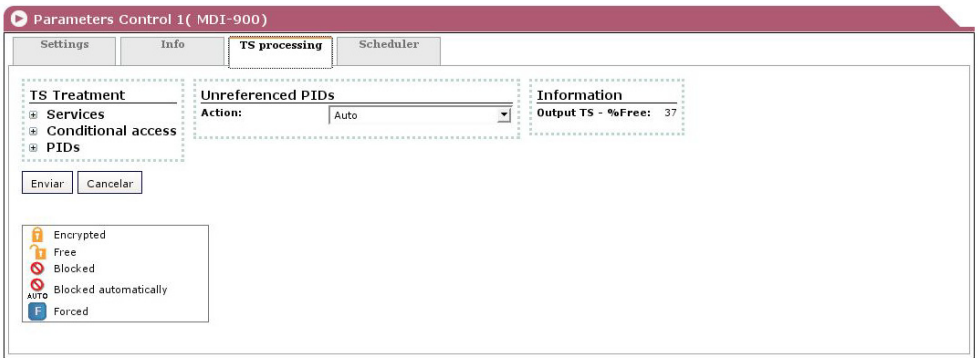


Figure 2.8 - TS Processing card of the Module's Parameters Control window

The card has three fields: **TS Treatment**, **Unreferenced PIDs** and **Information**.

"TS Treatment" :

It includes three sections —Services, Conditional Accesses, PIDs— through which you can block or unblock services, conditional accesses or PIDs, as well as force PIDs (*). The process is very simple: 1.Click on the "+" icon on the left of the section, Services for example, so that a window apperars showing, in this case, all the services available (Figure 2.9); 2.Select the services you want to block or unblock; 3.Select in the Action dropdown list the desired action (to block or to unblock); 4.Click finally on the *Send* button.

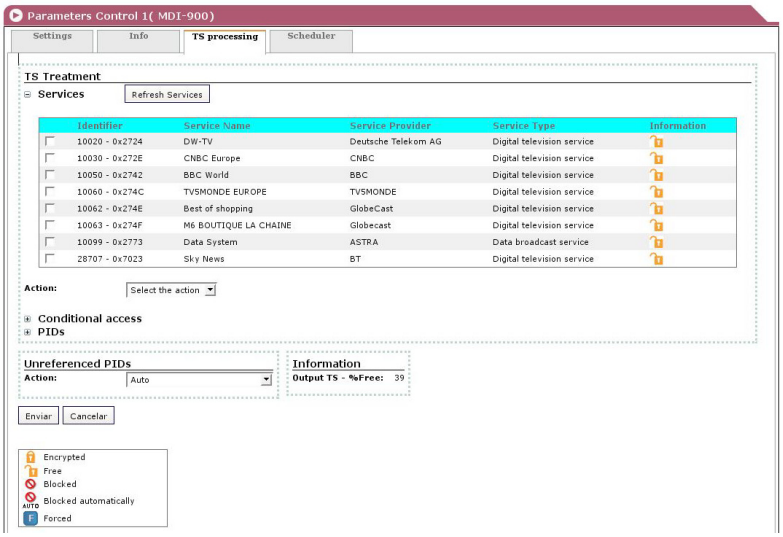


Figure 2.9 - TS Processing card — Services window

The current status of the Services, CAs and PIDs is displayed at the last column of the pop-up window through icons whose meaning is indicated in a box at the bottom of the card.

(*) See *Concerning information* on the next page.

"Unreferenced PIDs" :

The Action dropdown list offers three options for the unreferenced PIDs existing in the input transport stream:

- Auto : The transmodulator itself decides what to do with the unreferenced PIDs, either to block or let pass them.
- Block : All the unreferenced PIDs are blocked.
- Permit : All the unreferenced PIDs are let pass.

Once the selection is made, click on *Send*.

"Information" :

Output TS — % Free.

Here is indicated what the output TS is unoccupied, in other words, the percentage of null PIDs in the TS. The higher is the number, the lower overflow risk.

Concerning information

Unreferenced PIDs : The unreferenced PIDs are PIDs that are not related to any table, CA or service.

Null PIDs : Or stuffed PIDs, are PIDs that contain no information.

Block Service : When a service is blocked, all the related PIDs —video, audio, teletext and others— are blocked and the tables are updated.

Block Conditional Access : When a CA is blocked, the PIDs of the ECM and EMM are blocked and the tables are updated.

Block PID : When a PID is blocked the tables are not updated.

Force PID: To force a PID is to enable a PID, either referenced or not, which could be blocked as a consequence of the blockade action for a determined service or CA, or the blockade of unreferenced PIDs. This action may also be used to invalidate a by-default regenerated PSI/SI table, and to restore the original one.

Conditional Access

The Conditional Access tab only appears in receiver modules that have embedded or common interface conditional access. When you click on this, the following card is displayed:

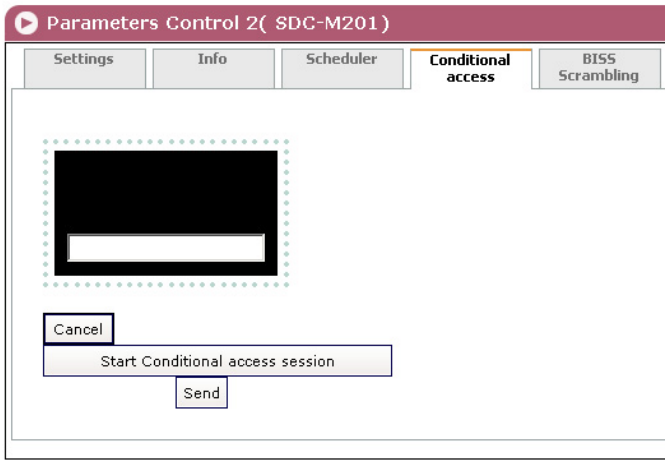


Figure 2.10 - Conditional Access card of the Module's Parameters Control window

If you want to make changes to the current module conditional access settings, click on *Start conditional access session*. The first of various screens that the program uses to configure access will appear.

BISS scrambling

The BISS scrambling tab only appears in receiver modules. When you click on this, the following card is displayed:

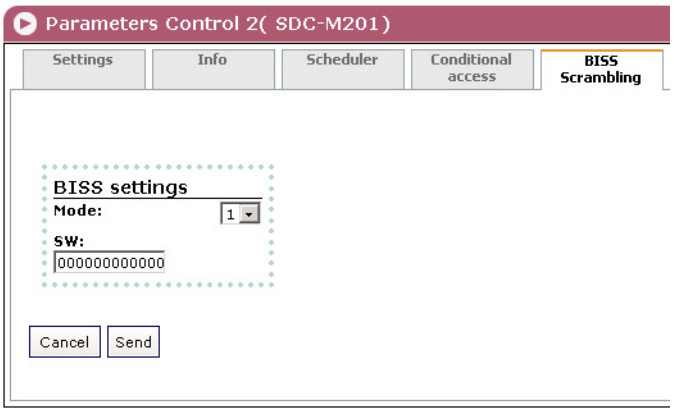


Figure 2.11 - BISS Scrambling card of the Module's Parameters Control window

If you want to make any changes to the Mode or System passwords, proceed as described earlier.

OSD

The OSD tab is related to the generation of OSD messages by the modules. When you click on this, the following card is displayed :

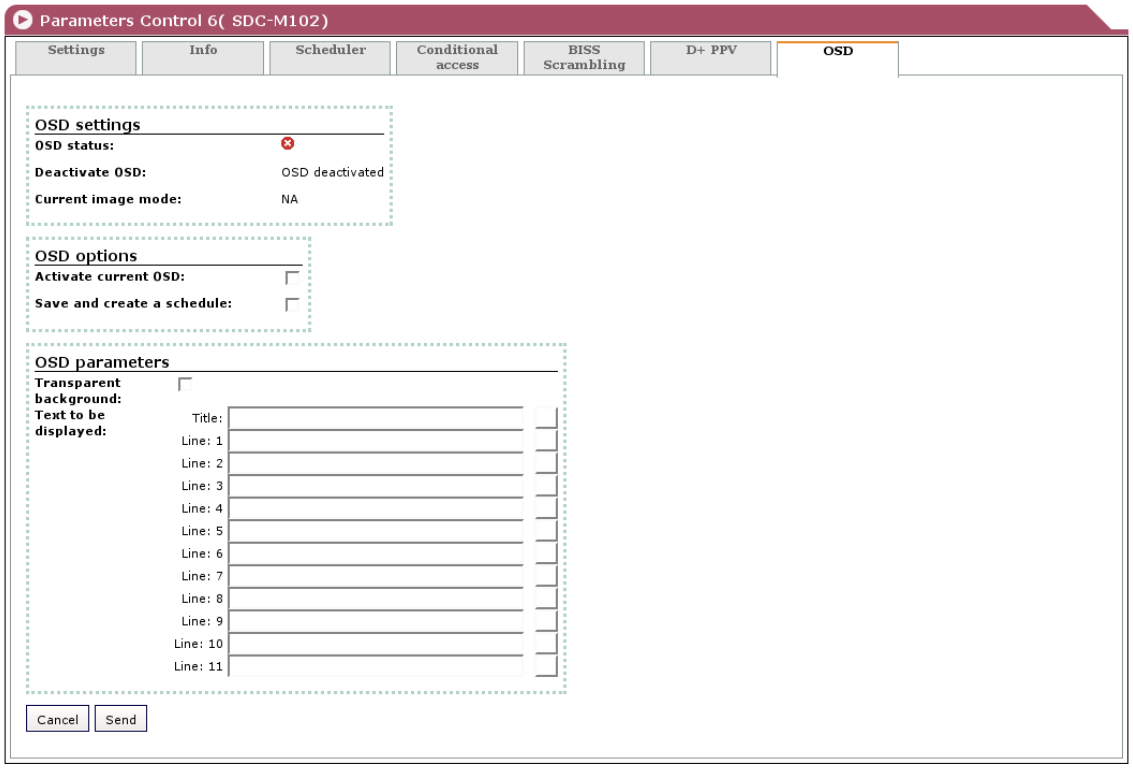


Figure 2.12 - OSD card of the Module's Parameters Control window

The card has three sections:

"OSD settings" : Indicates whether the module has the OSD mode put out (✖) or put in (✓), that is to say, if as indicated on the third line, the supplied video signal is TV image (DVB) or OSD text. If the OSD mode is currently put in, a *Putting Out OSD* button appears on the second line; the button allows to put the mode out directly.

"OSD Options" : Two boxes for two options. Tick the first one and click on the *Send* button if you want to activate in the module, at this moment, the OSD message written in the OSD Parameters section below (Figure 2.12 shows these lines empty). The second box will be ticked to create OSD configurations and/or OSD schedules (see pages 36 and 40).

"OSD Parameters" : The desired OSD text is edited here, on the seven lines available. The background will be transparet or black depending on you tick or not the box above. The colour of the characters is white by default, but it may be changed in each line; for that, click on the square buttons at the right and select the colour in the popup menu.

Creating Configurations for Making Schedules

The HMS unit allows to create schedules for each module of the headend. Scheduling may be either for parameter settings or for OSD messages. To do it, you must create previously the so called Module Configurations and OSD Configurations.

Module Configurations

"Module Configurations" refers to a set of values for all of its adjustment and selection parameters. The configurations are used to perform **module schedules** (pages 37 to 39).

The module configurations creation process can be described more clearly by giving examples.

Note

The windows in the examples refer to an SDC-M102 module. The windows for other models are similar, and at any rate it is structured in the same way as local programming with the SPI-300 command. Therefore, **you are recommended** to keep a copy of the Basic Operation manual at hand, as well as the module Programming Guides. You can download these from http://www.ikusi.com.

First example of Module Configuration — Prepare settings

The aim is to create an SDC module configuration with the channel WDR Aachen in channel 21 (471.25 MHz), with the rest of the adjustment parameters properly defined. The first step is to assign an SDC module of the headend for the operation. The parameters of this module will be adjusted to the values defined for the configuration using the Settings tab in the Parameters Control Module # window (pages 23/24).

Figure 2.13 shows the card, on which all of the settings defined for the configuration have been established:

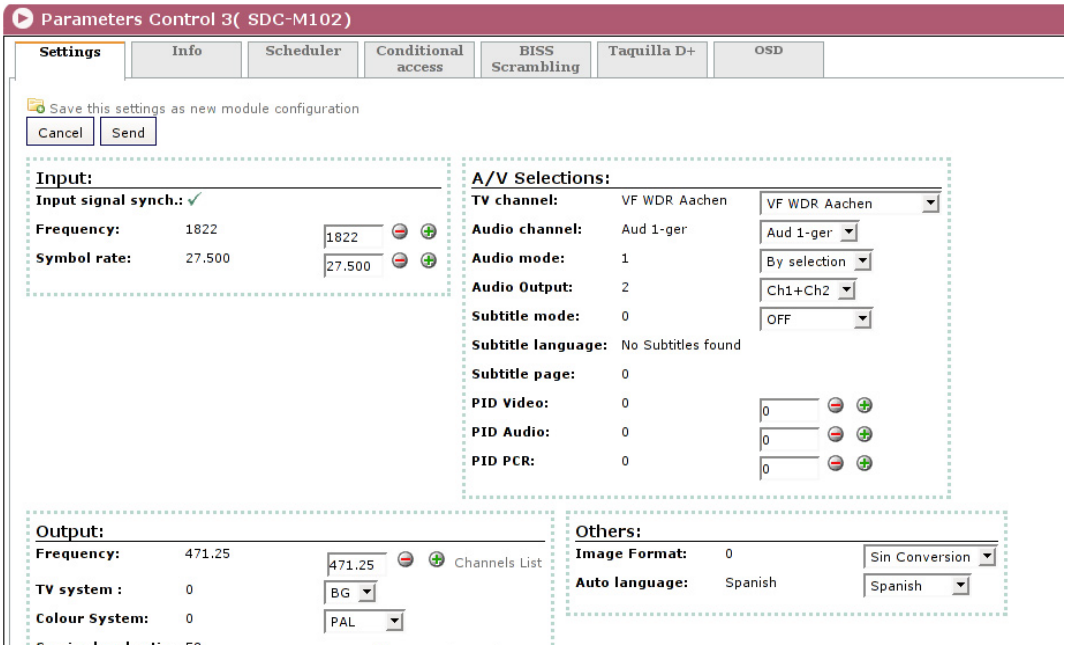


Figure 2.13 - Creating First Configuration. Step 1.

Once you are sure that all of the parameter values that appear on the card are established in the headend module and are defined for the configuration to be created, click on "Save these settings as new module configuration".

First example of Module Configuration — Saving configuration

When you click on "Save these settings as new module configuration", a form is displayed in the same area (Figure 2.14) through which the definitive configuration is created:

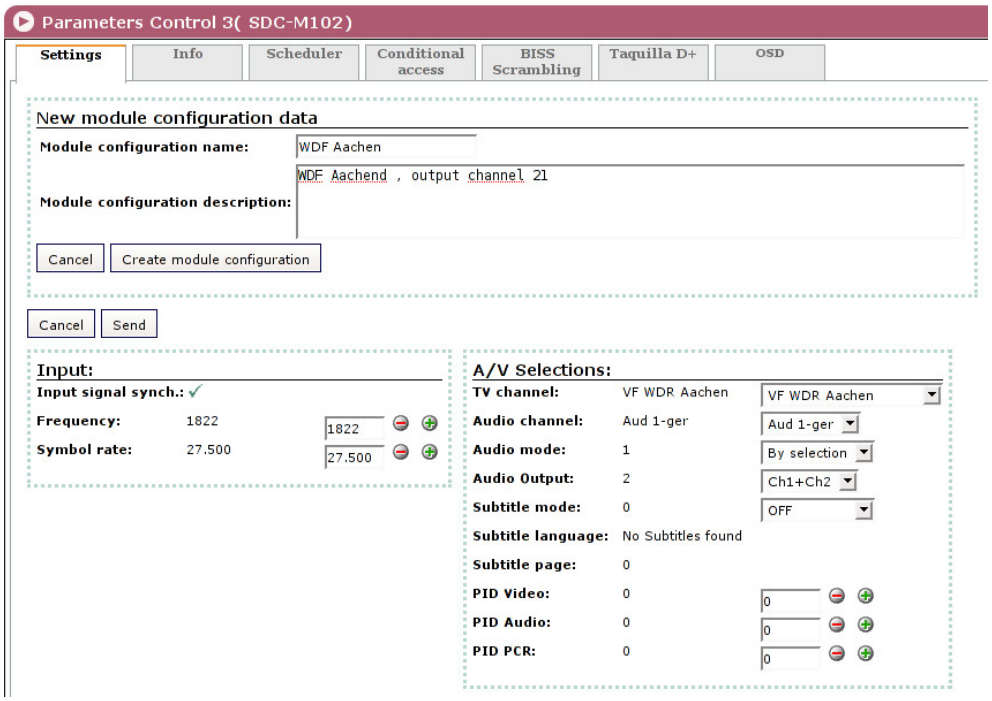


Figure 2.14 - Creating First Configuration. Step 2.

Fill in the two "New Module Configuration Data" fields:

"Module Configuration Name": Enter a short, clear name for the configuration.

"Module Configuration Description": Describe the configuration using the name entered above or a wider expression if desired.

Next, click on *Create Module Configuration*. The configuration is saved in the HMS unit and the screen brings up automatically the Available Configurations window (Figure 2.15, next page), which displays all the Module and OSD configurations stored currently in the HMS unit.

Available Configurations window

This window (Figure 2.15) is displayed automatically once a new configuration has been created (*), either for Module or for OSD. This displays all the configuraions stored currently in the HMS unit :

Figure 2.15 - Available Configurations window

To the left of each line on the list there are three icons relating the following actions:

Edit: If you want to change the configuration name or description, click on the first icon.

Download to PC: Click on the second icon to download a file containing the configuration data to the PC.

Delete: If you want to delete the configuration, click on the third icon.

As well as the aforementioned icons, at the top of the screen there is the option "Load new configuration from PC". When you select this, a form is displayed on which you can select and send a configuration file that is stored in the PC to the HMS unit.

Note

The Download to PC and Load from PC options allow you to create configurations in one headend and use them in another.

(*) You can open the Available Configurations window at any time by clicking on the *Headend → Configurations* option from the menu on the left of the general program screen (Figure 1.1, pag . 6). This window provides a list of all the configurations currently stored in the HMS unit.

Second example of Module Configuration — Preparing settings

The configuration being created this time is another SDC module configuration with the channel WDR Essen in the same channel as the previous one, 21. The transponder is the same as for WDR Aachen, which means that the input frequency is the same. The other parameters must be defined properly, as in the first configuration.

To create the configuration, the same SDC module used for the first configuration will be assigned. If the input frequency needs to be changed, the first step would be to change it in the Settings tab (Figure 2.16) and then run the *Send* command. Once the new frequency has been established in the module (which is not the case in the example), the channel WDR Essen and the other parameters can be selected in the A/V Selections section (Figure 2.17). Click on *Send* again.

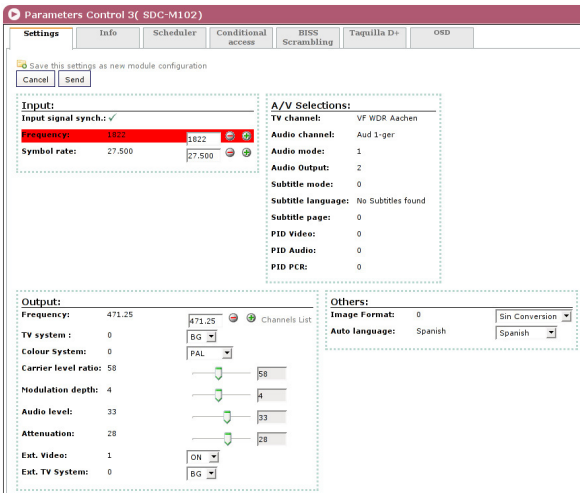


Figure 2.16 - Creating Second Configuration. Step 1.

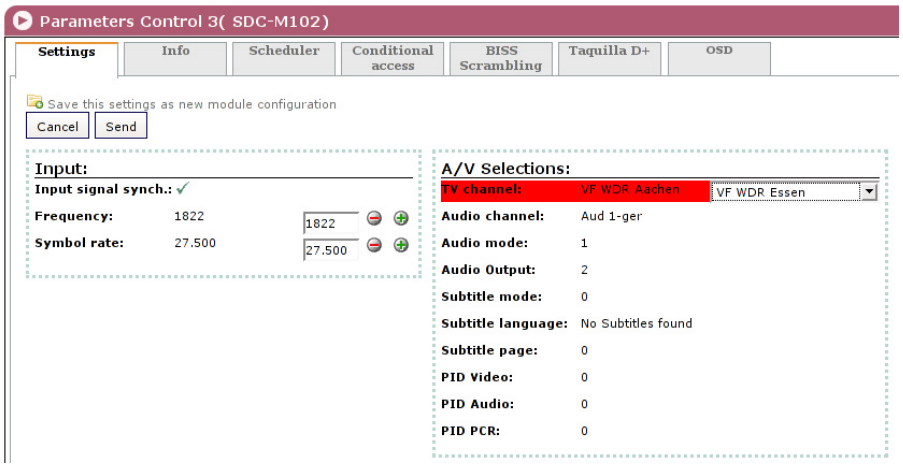


Figure 2.17 - Creating Second Configuration. Step 2.

Once all of the parameter values which appear on the Settings tab are established in the headend module and you have checked that they are defined for the configuration to be created, click on "Save these settings as new module configuration".

Second example of Module Configuration — Saving configuration

As explained for the first configuration (page 32), a form appears in which you must enter a name and description for the configuration being created (Figure 2.18). Once you have filled in the form, click on *Create Module Configuration*. The new configuration will be saved in the HMS unit.

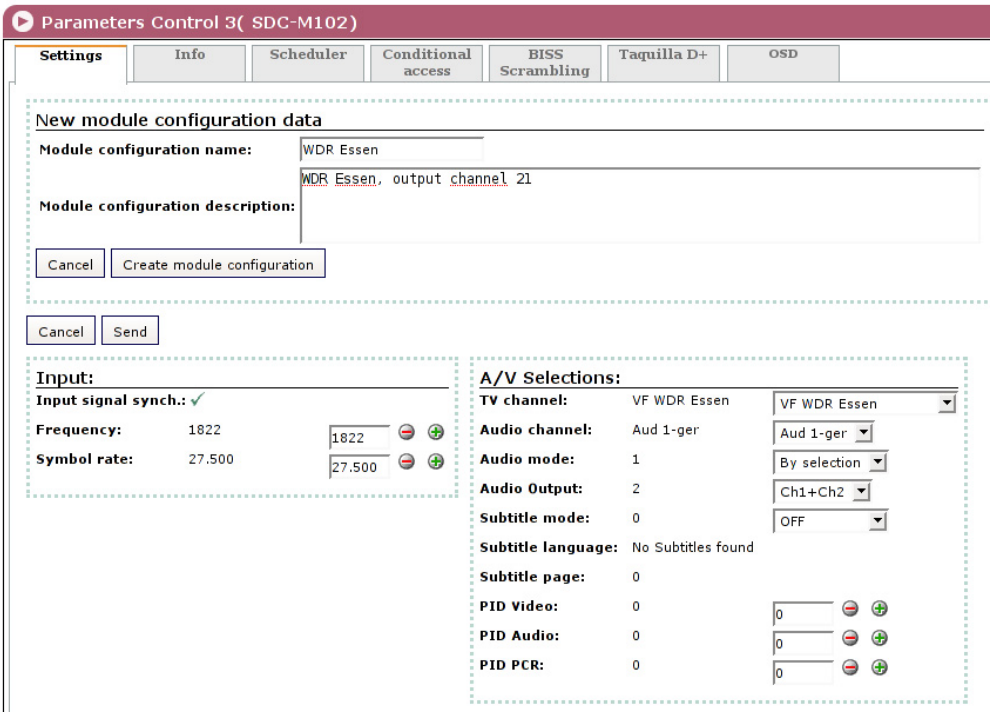


Figure 2.18 - Creating Second Configuration. Step 3.

Immediately after the configuration has been saved, the Availabe Configurations window will automatically reappear (Figure 2.15) . The list will now include the two configurations created.

OSD Configurations

An "OSD configuration" is simply a determined text message. The OSD configurations are used to perform **OSD schedules** (pages 40 and 41).

An OSD configuration is carried out through the OSD card. First edit the desired message in the OSD Parameters section. Next, at the OSD Options section, click on the "Save and create a schedule". The "New OSD Configuration Data" form is displayed at right :

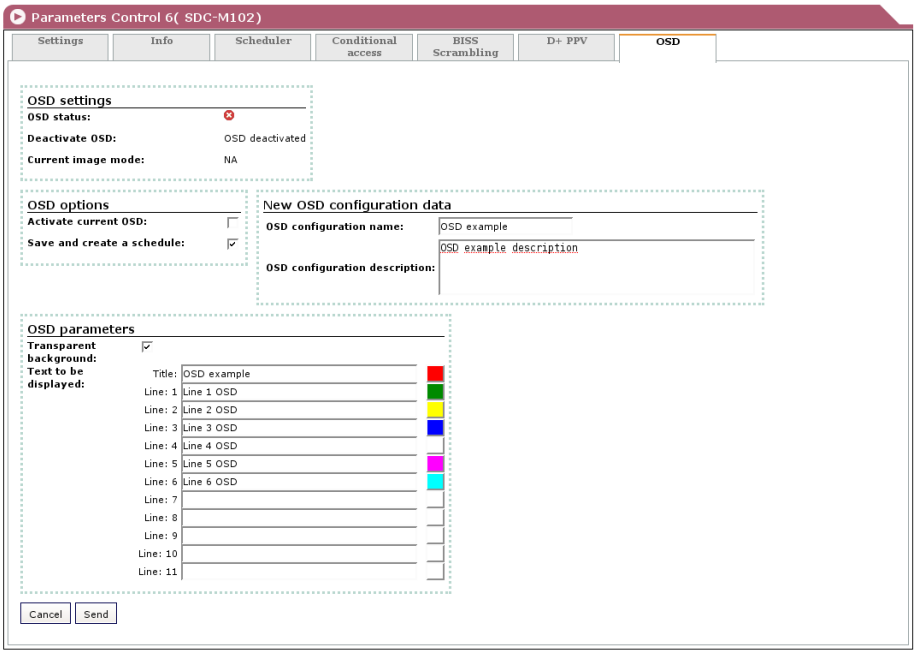


Figure 2.19 - OSD card — Creating OSD Configuration

Fill in the two fields of the form :

"OSD configuration name" : Enter a short name that identifie clearly the message.

"OSD configuration description" : Describe the configuration using the name entered above or a wider expression if desired.

Next, click on the *Send* button below. The configuration is saved in the HMS unit and the screen brings up automatically the Available Configurations window, which will include the OSD configuration that has been just created :

Figura 2.20 - Available Configurations window

Module Scheduler

The HMS unit allows you to plan module schedules in every module of the headend. Module schedules refer to automatically changing —on preset time and date— of the value of one or several adjustment and selection parameters of the module.

By using the two module configurations created in the examples on pages 31 to 35, the following example explains the process required to apply the following daily schedules in an SDC-M102 module, which ranks number 2 on the headend station:

Time frame	Channel	Output channel
09:00 to 22:00	WDR Aachen	21 (471.25 MHz)
22:00 to 09:00	WDR Essen	21 (471.25 MHz)

On the left-hand menu of the general program screen, click on the *Headend → Scheduler* option. The Scheduler window is displayed:

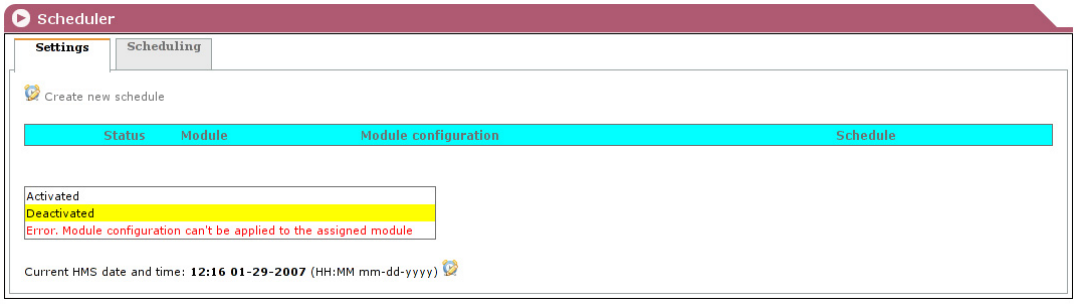


Figure 2.21 - Module Scheduler (I-a)

The Settings card of this window shows the schedules currently stored in the HMS unit. In the figure, none exist yet. To apply the two schedules given above in the "2 SDC-M102" module, click on "Create new schedule". A form is displayed in the same area of the window (Figure 2.22, next page) which you must fill in for each of the two schedules, the one for the channel WDR Aachen and the one for the channel WDR Essen, both of which are in UHF channel 21. The configurations will be requested and will be the two created on the previous pages.

Note

In order to create a schedule, the corresponding module configuration has to be stored previously in the HMS unit.

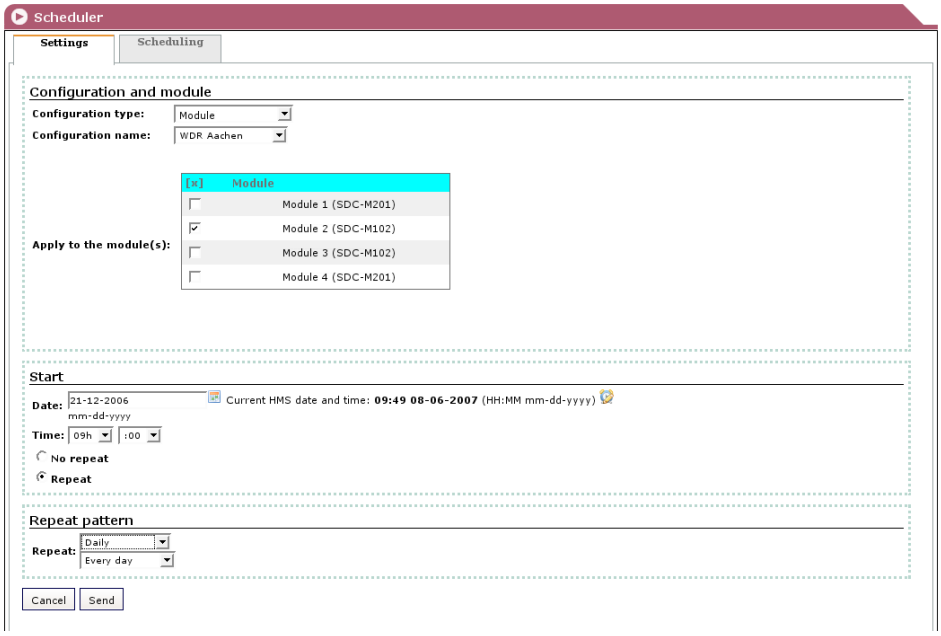


Figure 2.22 - Module Scheduler (I-b)

Creating a schedule for WDR Aachen

Fill in the three fields existing in the Configuration and Module form:

"Configuration type": Select Module from the dropdown list.

"Configuration name": Select the name of the configuration that you want to apply from the dropdown list (in this case, "WDR Aachen in channel 21").

"Apply to module (s)": The popup window shows all of the SDC-M102 modules in the headend. Select module number 2.
(The list only shows the SDC-M102 models that exist in the headend since the configuration selected from the previous dropdown list corresponds to this module model).

Next, fill in the Start section:

Start "Date" and "Time": Enter the date and time which will change the adjustment and selection parameters of the "2 SDC-M102" module to those defined in the selected configuration. In the example, today's date and the time 09:00 are entered.

"No repeat" / "Repeat": Refers to the scheduled change. As the scheduled change must be daily, the affirmative option is selected.

Finally, fill in the Repeat Pattern:
(Note : This section does not appear if you selected "No repeat" above)

"Repeat": The frequency with which the parameter change must be applied. Select Daily and Every day.

Once you have completed all of the sections, click on *Send*. The form disappears and the window displays the list of existing schedules, which will include the one that you have just created (Figure 2.23, next page).

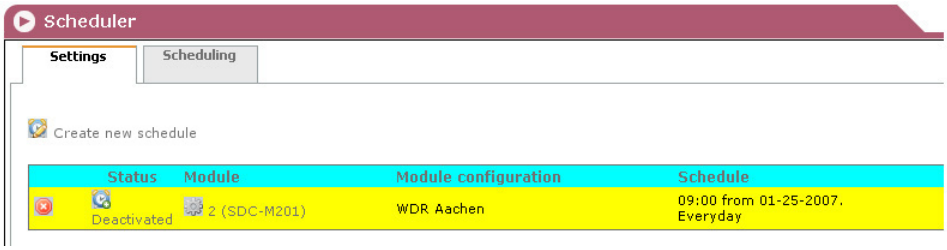


Figure 2.23 - Module Scheduler (I-c)

Creating a schedule for WDR Essen

Click on "Create new schedule" (Figure 2.20). The form appears again, in which you must fill in the information relating to the schedule for WDR Essen (Figure 2.24):

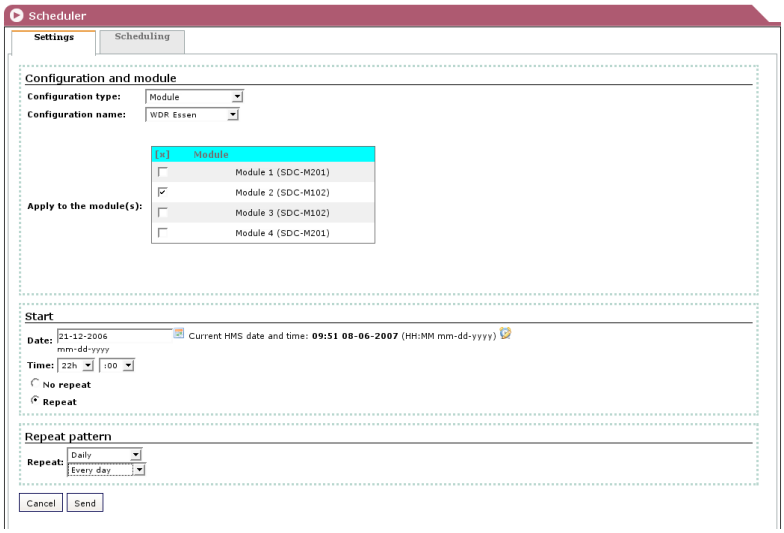


Figure 2.24 - Module Scheduler (I-d)

The configuration to be selected this time is "WDR Essen in channel 21", which will be applied to the same module (2 SDC-M102). The start time in this case is 22:00 and the repeat pattern is also daily.

Once you have completed all of the sections, click on *Send*. The form disappears and the window displays the list of existing schedules, which will include the two ones that have been created:

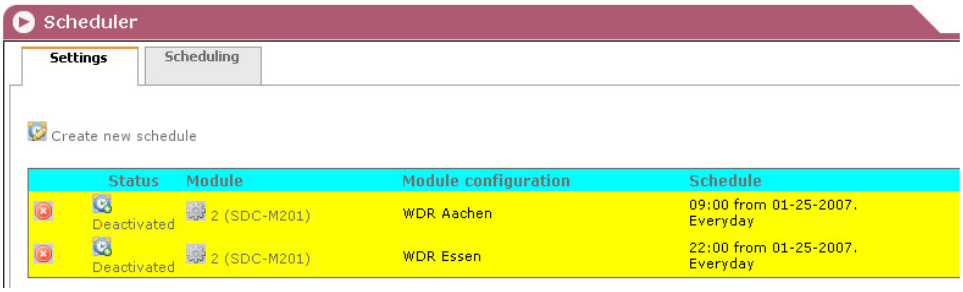


Figure 2.25 - Module Scheduler (I-e)

OSD Scheduler

The purpose of OSD schedules is to generate —on preset time, date and duration— OSD messages on the part of selected modules of the headend. These messages will have been previously stored in the headend as OSD Configurations (page 36).

OSD schedule creation procedure is similar to that explained for Module schedules. On the left-hand menu of the general program screen, click on the *Headend → Scheduler* option. The Scheduler window is displayed :

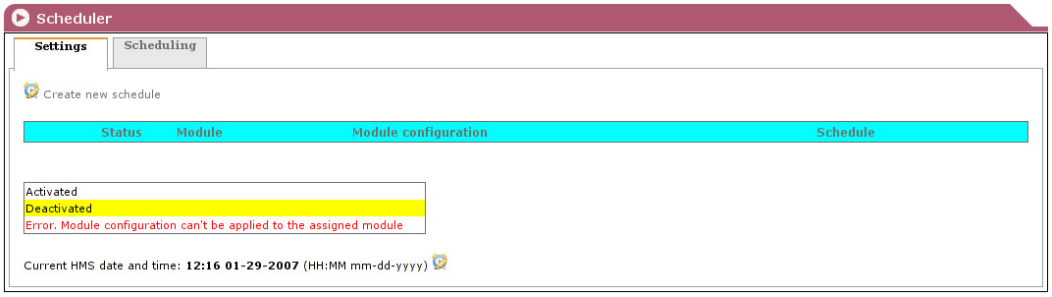


Figura 2.26 - OSD Scheduler (I-a)

The Settings card of this window shows the schedules currently stored in the HMS unit. In the figure, none exist yet. To apply one OSD schedule to one or several modules of the headend, click on "Create new schedule". A form is displayed in the same area of the window :

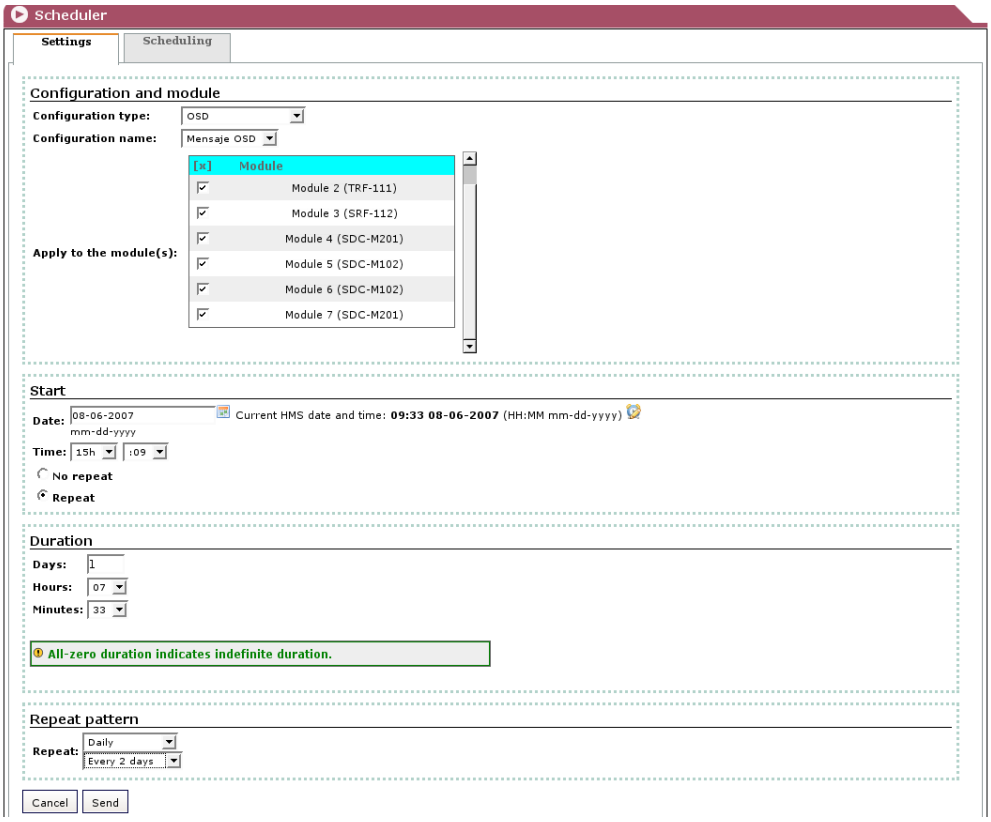


Figure 2.27 - OSD Scheduler (I-b)

Fill in the three fields existing in the Configuration and Module form:

"Configuration type": Select OSD from the dropdown list.

"Configuration name": Select the name of the OSD configuration that corresponds to the desired OSD.

"Apply to module (s)": The popup window shows all the modules of the headend. Select the module (s) to which you want to apply the OSD schedule.

Next, fill in the Start section :

Start "Date" and "Time": Enter the date and time as of which the selected modules will transmit the selected OSD message.

"No repeat" / "Repeat": Refers to not endow or endow with periodicity the message displaying.

Fill in the Duration section :

"Days", "Hours" and "Minutes" : Enter the desired duration of the OSD message.

Finally, fill in the Repeat Pattern:
(Note : This section does not appear if you selected "No repeat" above)

"Repeat": The frequency with which the message appears.

Once you have completed all of the sections, click on *Send*. The form disappears and the window displays the list of existing schedules (as Module's as OSD's), which will include the one that you have just created:

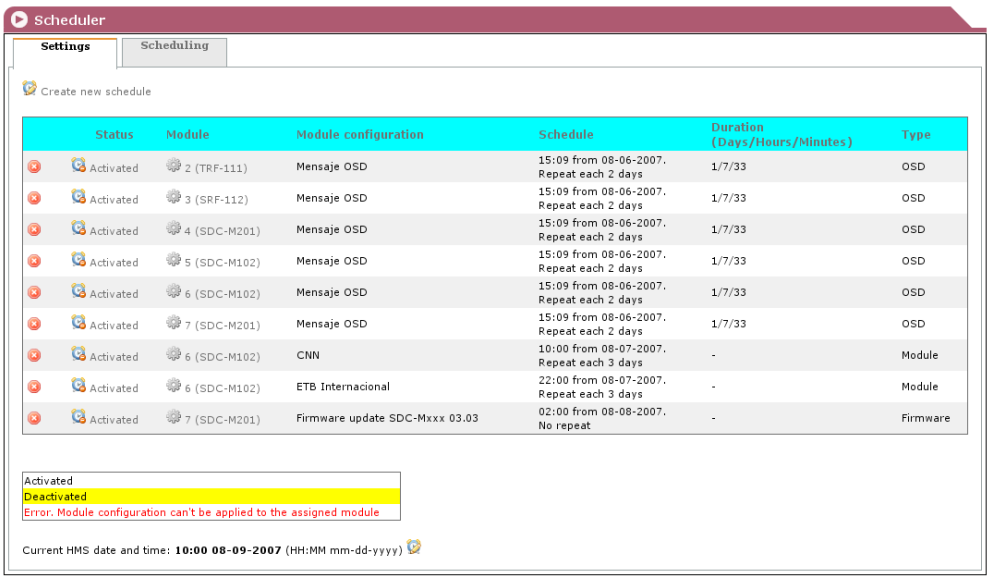


Figure 2.28 - Settings card of the Scheduler window (I-a)

Activate/Deactivate Schedules

The list of schedules stored in the HMS unit can be accessed at any time by clicking on the *Headend → Schedules* option on the menu to the left of the general program screen. A window similar to the one shown in Figure 2.28 on the previous page will be displayed.

A schedule can be deleted from the memory by clicking on the icon on the extreme left of the line. A less drastic option is to deactivate it, allowing you to keep it in the memory for future use.

The schedule can be activated (deactivated) by clicking on the icon above the word Deactivated (Activated). Deactivated schedules are highlighted in yellow and activated schedules are highlighted in white :

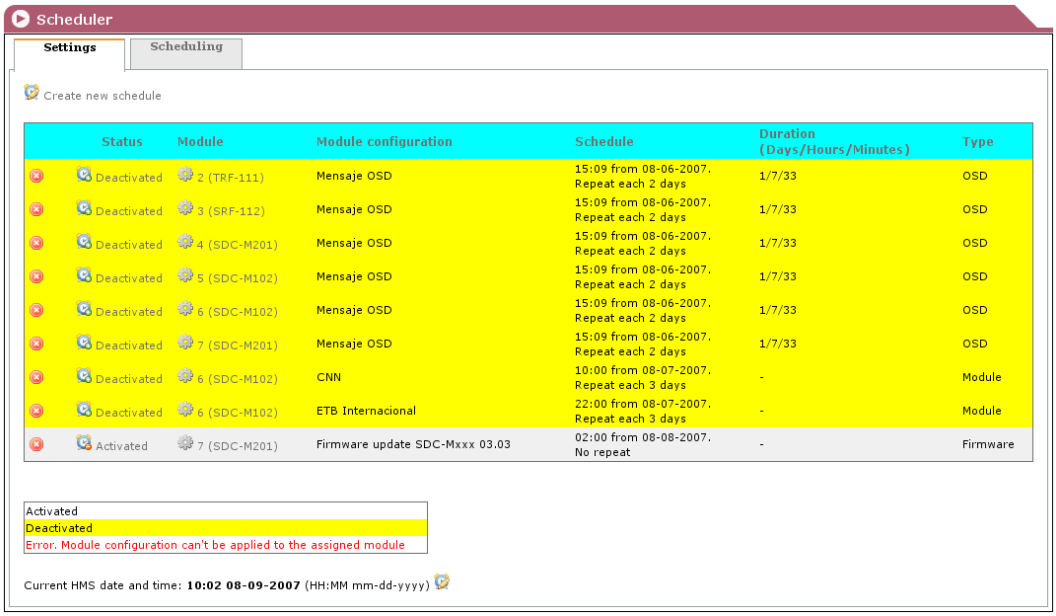


Figure 2.29 - Settings card of the Scheduler window (I-b)

Firmware Update Schedules

Although the creation of this type of schedules is not carried out from *Headend → Schedules*, but from *Headend → Firmware*, they are mentioned here because these schedules are included together with the Module's and OSD's ones in the information provided by the Scheduling card (next page).

The *modus operandi* to create these schedules is different to that explained for Module and OSD, since it is not necessary to create previously any type of configuration. The procedure is more direct and is explained in the Firmware section (pages 46 to 48).

Scheduling

To find out the changes scheduled for the next 7 days, click on the Scheduling tab. The following card is displayed :

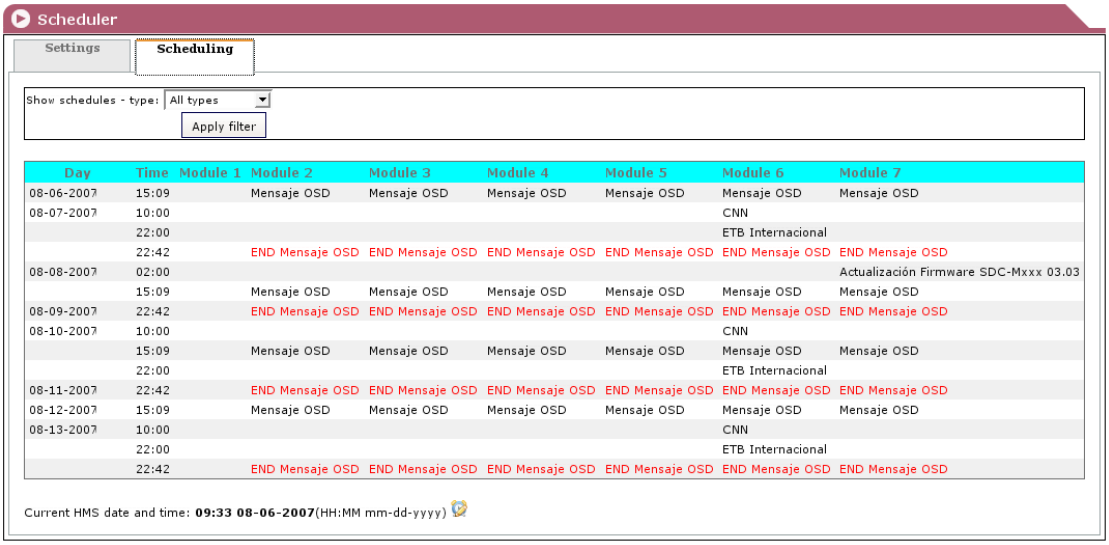

Scheduler
Settings
Scheduling
Show schedules - type: All types
Apply filter
Day Time Module 1 Module 2 Module 3 Module 4 Module 5 Module 6 Module 7
08-06-2007 15:09 Mensaje OSD Mensaje OSD Mensaje OSD Mensaje OSD Mensaje OSD Mensaje OSD
08-07-2007 10:00 CNN
22:00 ETB Internacional
22:42 END Mensaje OSD END Mensaje OSD END Mensaje OSD END Mensaje OSD END Mensaje OSD END Mensaje OSD
08-08-2007 02:00 Actualización Firmware SDC-Mxxx 03.03
15:09 Mensaje OSD Mensaje OSD Mensaje OSD Mensaje OSD Mensaje OSD Mensaje OSD
08-09-2007 22:42 END Mensaje OSD END Mensaje OSD END Mensaje OSD END Mensaje OSD END Mensaje OSD END Mensaje OSD
08-10-2007 10:00 CNN
15:09 Mensaje OSD Mensaje OSD Mensaje OSD Mensaje OSD Mensaje OSD Mensaje OSD
22:00 ETB Internacional
08-11-2007 22:42 END Mensaje OSD END Mensaje OSD END Mensaje OSD END Mensaje OSD END Mensaje OSD END Mensaje OSD
08-12-2007 15:09 Mensaje OSD Mensaje OSD Mensaje OSD Mensaje OSD Mensaje OSD Mensaje OSD
08-13-2007 10:00 CNN
22:00 ETB Internacional
22:42 END Mensaje OSD END Mensaje OSD END Mensaje OSD END Mensaje OSD END Mensaje OSD END Mensaje OSD
Current HMS date and time: 09:33 08-06-2007(HH:MM mm-dd-yyyy)

Figure 2.30 - Scheduling card of the Scheduler window

The card can show either all the existing schedules or those of each type separately (Module, OSD or Firmware). Select the desired option in the dropdown list above and next click on *Apply filter*.

RF Levels - Monitor and Equalisation

Two RF signals are connected to the HMS unit:

a) the multichannel output connection signal of the modules; and

b) a tap signal taken from the output of the headend RF amplifier.
(Usually, the amplifier is an HPA module and the tap signal used is the output test signal, as explained in the Installation and Access manual).

The levels of the two multichannel signals mentioned are monitored by the HMS unit, which shows them separately, channel by channel. Also, the unit includes an AGC system that can control each single channel level, keeping it within set limits.

On the left-hand menu of the general program screen, click on the *Headend → RF Levels* option. The RF Signal Levels window is displayed:

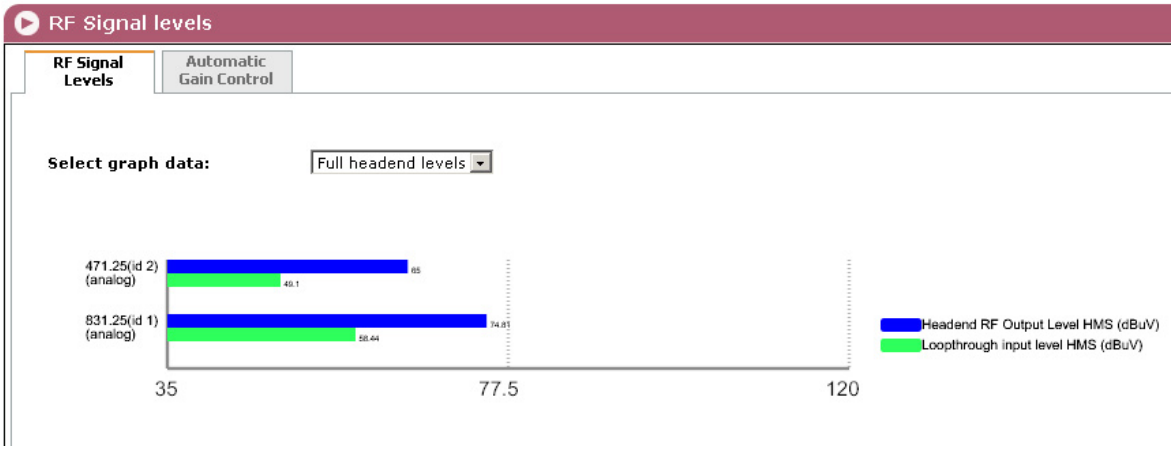


Figure 2.31 - Levels card of the RF Signal Levels window (I-a)

Levels

The RF Signal Levels card displays two levels for each channel: the output coupling signal of the modules (or loop-through input signal) and the headend output signal. Both are shown on a bar chart (Figure 2.31): the first in green and the second in blue.

At the top of the card there is a "Select graph data" dropdown list, which allows you to select a specific headend module in order to obtain a graph showing the progress, over the last 2 hours, of the module output channel signal levels at the aforementioned headend points (see Figure 2.32 on the next page).

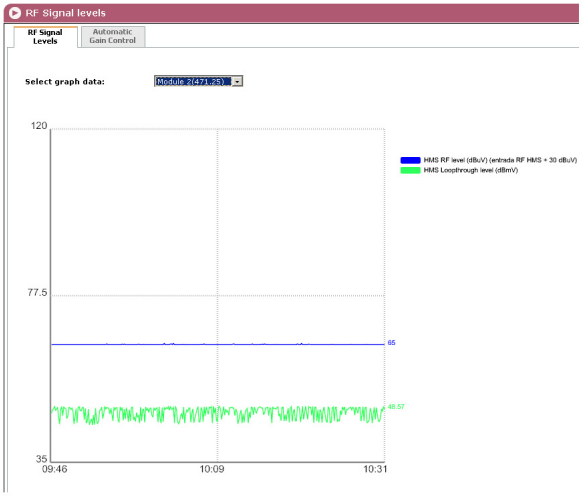


Figure 2.32 - RF Signal Levels card of the RF Signal Levels window (I-b)

Automatic Gain Control

Click on the Automatic Gain Control tab. The following card appears:

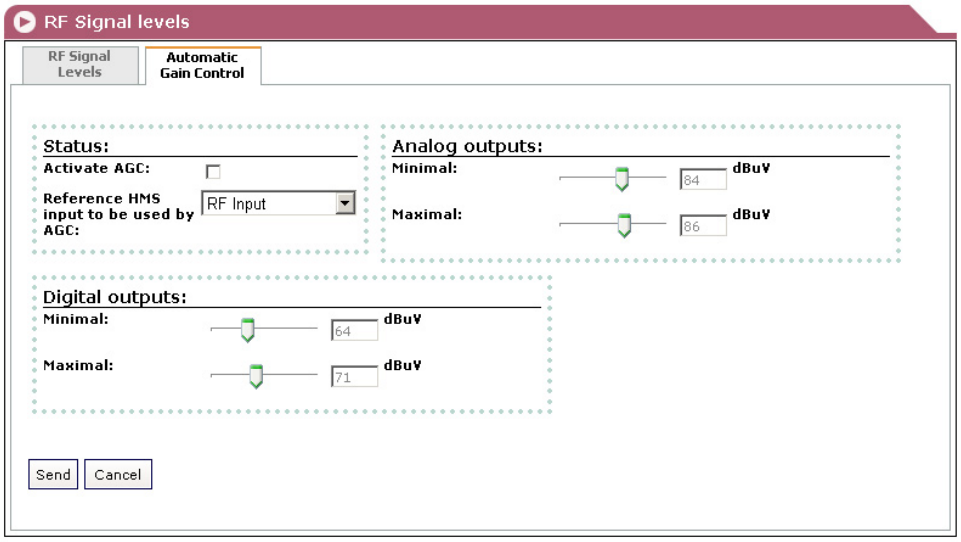


Figure 2.33 - Automatic Gain Control card of the RF Signal Levels window

The card is divided into three sections:

"Activate AGC": Check the box if you want to activate the AGC system.

"Reference HMS input to be used by AGC": Select RF Input if you want the system to operate in accordance with the output tap signal level. Select Loop-through input if you want it to operate in accordance with the loop-through input signal level of the HMS unit.

Desired signal levels: Use the cursor to enter the maximum and minimum values desired for both analogue and digital channels at the selected port (RF input or loop-through input).

Once you have filled in the various fields, click on *Send*. If, at the last moment, you decide to keep the current values, click on *Cancel*.

Firmware Management

The HMS unit provides full information about the headend module firmwares and allows these to be updated.

On the left-hand menu of the general program screen, click on the *Headend* → *Firmware* option. The Firmware Updates window is displayed:

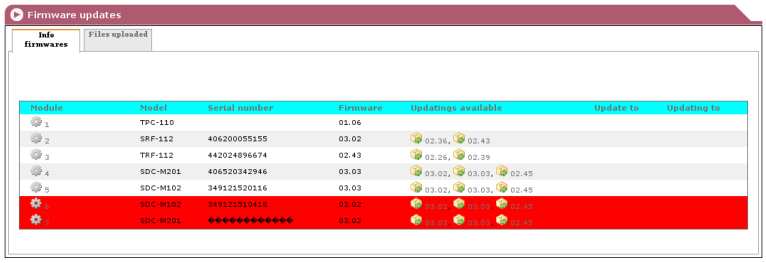


Figure 2.34 - Firmwares Info card of the Firmware Updates window (I-a)

Firmwares Info

The Firmwares Info card (Figure 2.34) displays a list of the firmwares of the headend modules, identified by model name and serial number, as well as of the updating files available currently in the HMS unit.

Files Uploaded

Click on the Files Uploaded tab. The card displayed (Figure 2.35) shows a list of the files that the unit has stored and the module models that apply:

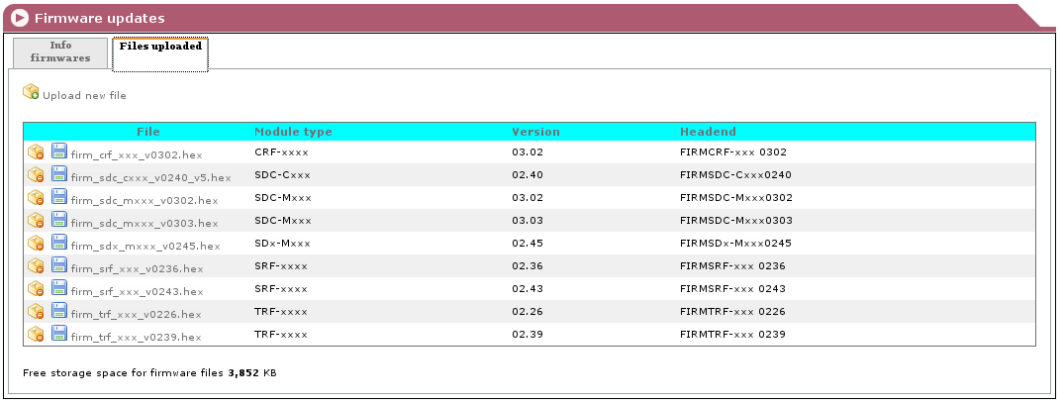


Figure 2.35 - Files Uploaded card of the Firmware Updates window (I-a)

There are two icons on the left of each line on the list:

"Delete": When you click on this icon, the firmware file is deleted from the unit's memory.

"Download": Click on this icon to download the file to the PC.

Uploading a firmware file to the HMS unit

To be able to update the firmware of one module, the corresponding file has to be stored in the PC's hard disc. Starting from here, the first operation is to load it into the HMS control unit..

On the Files Uploaded card (Figure 2.32, previous page), click on "Upload new file". The "Select file" field is displayed in the same area (Figure 2.36):

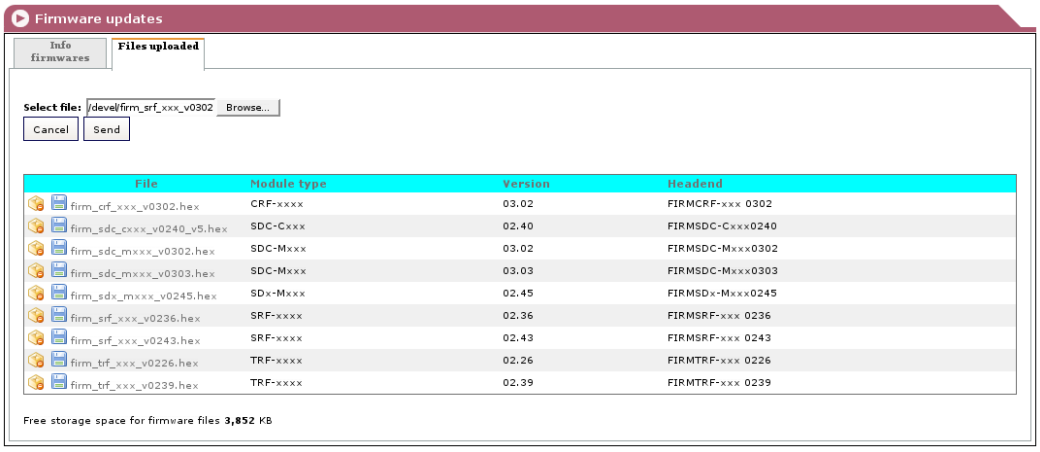


Figure 2.36 - Files Uploaded card (I-b)

In this field, click on *Browse* and select the update firmware file from the PC explorer. Once the file name appears in the box, click on *Send*. The file is sent to the HMS unit, and when this has received it properly, the Firmwares Info card reappears on the screen with a message at the top stating that the file has been received (Figure 2.37):

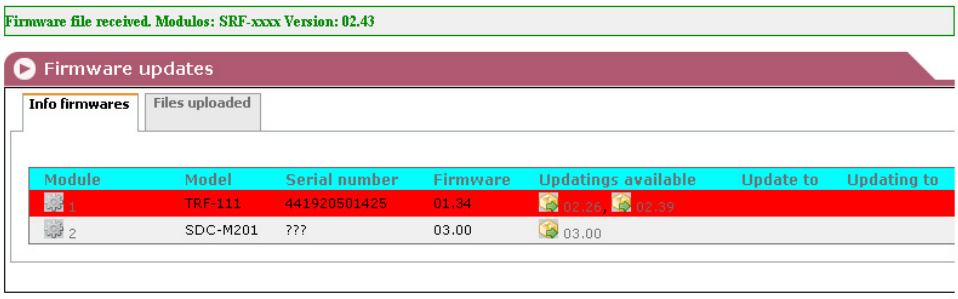


Figure 2.37 - Firmwares Info card (I-b)

You will know when the firmware file is stored in the HMS unit because in the "Updates available" column the version number appears for the applicable modules. Also, the lines of the modules that have a previous firmware version installed will be highlighted in red.

Firmware Updating

On the red line, which shows a module with a firmware version that has not been updated (Figure 2.37), click on the icon to the left of the version number (02.45) in the "Updates available" column. The line will change to yellow and the version number will also be shown in the "Update to" column (Figure 2.38). You have now processed an update order (the sending process is still required). If you have processed update orders for several modules, in other words, there are several yellow lines, and, at the last moment, you decide to cancel any of them, click on the icon in the "Update to" column.

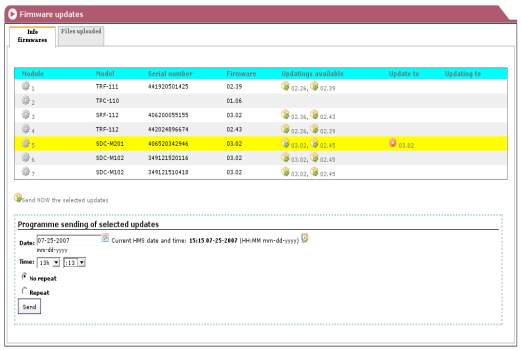


Figure 2.38 - Firmwares Info card — Updating firmwares (I)

The final step to update the firmware of the modules that are highlighted in yellow may be taken yet (by clicking on "Send NOW the selected updates"), or may be programmed to be taken further on by filling in the form below and clicking on the *Send* button. In this second case a **firmware update schedule** will have been created (see page 42 below).

If you clicked on "Send NOW the selected updates", the last column —"Updating to"— shows the progress (Figure 2.39) :

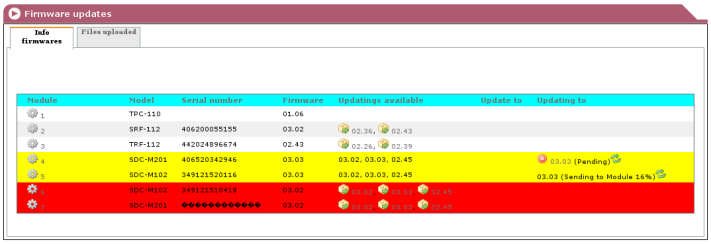


Figure 2.39 - Firmwares Info card — Updating firmwares (II)

A message indicates that the update is complete in the "Updating to" column (Figure 2.40). If there are several yellow lines, the updates take place one after the other.

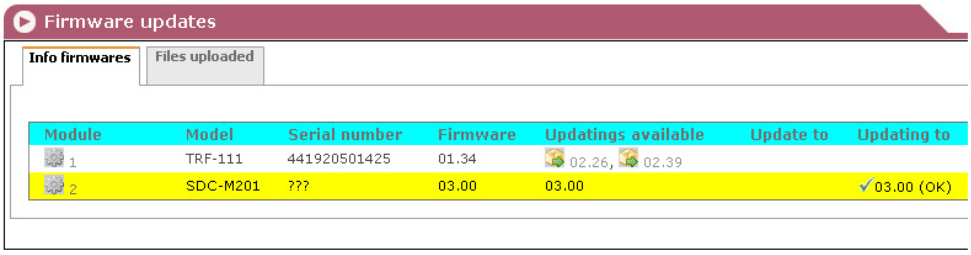


Figure 2.40 - Firmwares Info card — Notice of update ended

Info Channel — HMS-130

The HMS-130 unit adds an "info" channel to the general benefits of the HMS units. An info channel is a conventional, analogue TV channel which offers a carrousel of fixed images (slides) accompanied with sound. The slides as well as the sound will have been previously loaded in the HMS-130 unit as jpg or bmp image files and mp3 sound files, or as zip compressed files.

On the left-hand menu of the general program screen (Fig. 2.1, page 21), click on the *Headend → Info Channel* option. The Info Channel window appears. If has 5 cards, through which you can configure the RF parameters of the generated TV channel, as well as create, manage and schedule playlists. A playlist is a collection of several jpg or bmp files and one mp3 file.

Configuration

Click on the Configuration tab. The following card is displayed :

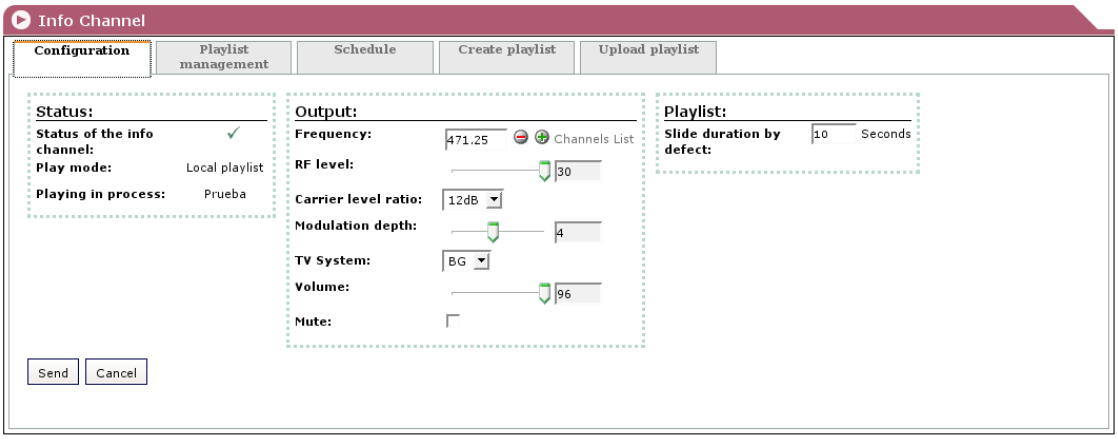


Figure 2.41 - Configuration card of the Info Channel window

The card has three sections:

"Status" : Informs whether the info channel is off (✖) or activated (✓). Activation and deactivation are carried out on the Playlist Management card, as it will be explained on page 53. If the channel is active, both the origin of the list which is being played and its name are displayed.

"Output" : Through dropdown lists and slide icons you set here the RF parameters of the info channel : frequency, level and modulation depth of the video carrier, television system, carrier level ratio and audio modulation index ("volume"). RF level, modulation depth and volume must be set with the help of a field strength meter connected to the output of the unit (or of the ClassA headend). The sound may be temporarily silenced by checking the MUTE box.

"Playlist" : You enter here the duration in seconds that you want to state as pre-determined for the slides that will make up the lists.

Once you have filled in the three sections, click on the *Send* button. If, at the last moment, you decide to keep the previous configuration, click on *Cancel*.

Creating a Playlist

Click on the Create Playlist tab. The following card appears. It has, on principle, a unique section, "General Parameters" :

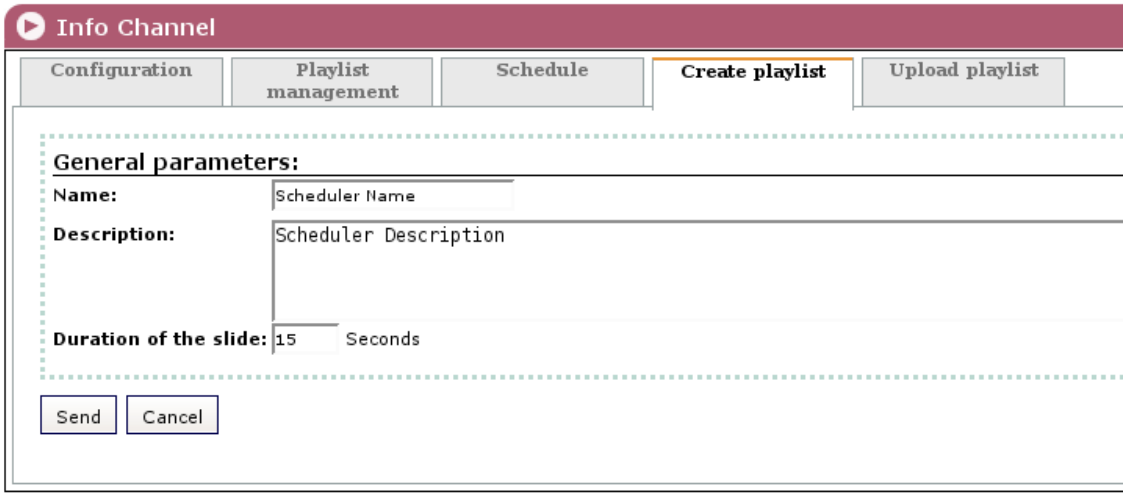


Figure 2.42 - Create Playlist card — General Parameters

The section has 3 fields :

"Name" : Enter the name you want to assign to the playlist that you are going to create.

"Description" : Describe the playlist using the name entered above or a wider expression if desired.

"Duration of the slide" : It is the duration that will have all the slides that will make up the playlist. The predetermined duration appears by defect. Change it if you want.

Click next on the *Send* button. The new playlist is saved in the HMS-130 unit and at the same time two new sections come out in the window: "Slides of the Playlist" and "Sound" :

"Slides of the Playlist" : This section has 2 fields (see Figure 2.43 on the next page) with a collection of icons which do very easy to make up the playlist that you are creating.

"Playlist" : The box is on principle empty. The slides to be incorporated may be brought either from the box at right ("Slides available"), where all the slides stored in the HMS-130 unit are shown, or from a local storage unit (i.e. hard disk). In the first case, one select the desired files in the box at right and then click on the icon between the two box. In the second cas (transfer from a local unit), click on the last icon from above ( ) and select the files as usual.

Once all the desired image files (slides) are in the left box, you can preview and order them by using the icons from above :

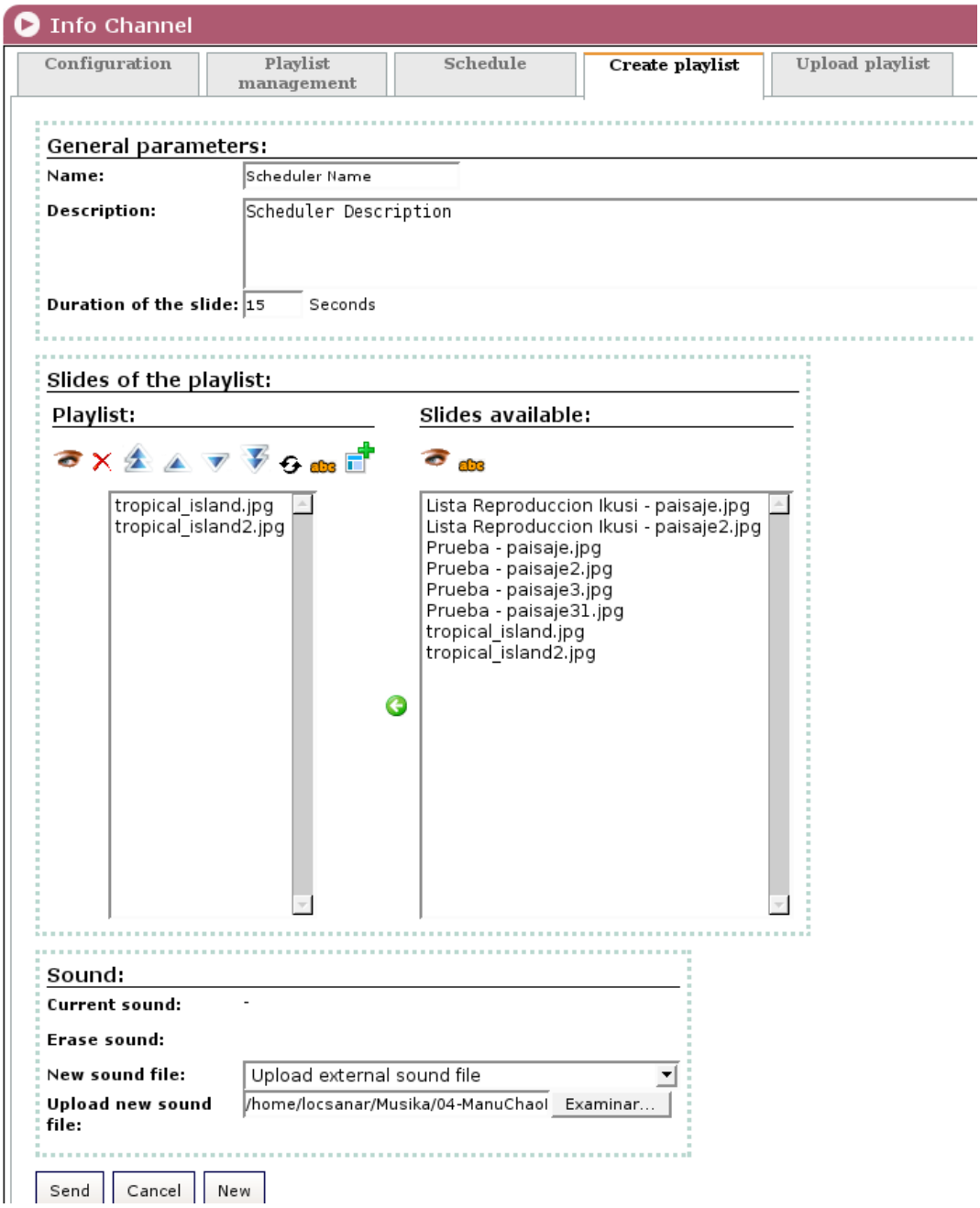


Figure 2.43 - Create Playlist card — Slides of the list

- Previews the selected slide.
- Erases the selected slide.
- Put in the first place the selected slide.
- Steps up one position the selected slide.
- Steps down one position the selected slide.
- Puts in the last place the selected slide.
- Exchanges the positions of two selected slides.
- Puts in alphabetical order the slides visible in the box.
- Allows to add slides from a local storage unit.

"Slides available" : The rest of jpg and bmp image files stored in the HMS-130 are shown in this box. The two icons from above have the following functions:

- Previews the selected slide.

- Puts in alphabetical order the slides of the box.

"Sound" : You select here the mp3 file to incorporate to the playlist that you are creating. The file will be one which is stored either in the HMS-130 unit or in a local storage unit.

This section has 4 fields that are empty on principle, with the exception of the third one ("New sound file") :

"Current sound" : It is the mp3 file that have been selected through the third or fourth field.

"Erase sound" : If you decide to erase the current sound, check the box and click on the *Send* button

"New sound file" : Here you can either select directly one of the mp3 files stored in the HMS-130 unit or direct the selection towards a local storage unit (i.e. hard disk) by choosing "Upload new sound file" from the dropdown list. Once the file is selected, click on the *Send button*. If you selected a file stored in the HMS-130 unit, its name will appear now in the "Current sound" field.

"Upload new sound file" : This field is only enabled if you chose "Upload new sound file" in the previous field. Select the mp3 file in the local storage unit and click on the *Send* button. The name of the file will appear now in the "Current sound" field.

Once the composition of the new playlist is completed, click on the *Send* button. The "Slides of the Playlist" and "Sound" sections disappear, and the window starts showing only the "General Parameters" section.

Managing Playlists

Click on the Manage Playlists tab. The related card appears showing a table with the characteristics of all the playlist stored in the HMS-130 and, eventually, those of a playlist stored in a pendrive which would be plugged in the unit. The table has 4 icons, two at the left and two at the right :

- Allows to edit the name of the selected playlist.
- Removes the selected playlist.
- Activates the selected playlist, if it was stopped. (If a playlist is activated when other playlist is active, the latter is automatically stopped before the former become active).
- Stops the active playlist. (All the time only one playlist may be active).

USING AN USB PENDRIVE. When a pendrive which has several jpg or bmp image files and one mp3 sound file in its root folder is plugged in the USB port of the HMS-130 unit, this one just creates, based on these files, a playlist that **becomes automatically the active playlist**. The slides will be displayed on the TV set screen taking an alphabetical order.

The playlist created from an USB pendrive will appear in the table together with the rest of playlists, but the related icons are different : *edit* and *remove* icons are not available but a new one ( ), which allows **to export** to the HMS-130 unit the image and sound files contained in the pendrive.

Info Channel
Configuration
Playlist management
Schedule
Create playlist
Upload playlist
Status Playlist Description Type Number of slides Duration (s) Sound Options
Stoppped Lista Reproduccion Ikusi Lista de ejemplo Local 2 8 No
Playing Lista de Reproduccion USB Lista de Reproduccion USB 6 07GiveUpOnceForAll.mp3
Stoppped Prueba prueba Local 4 5 101-amy_winehouse-rehab-ukp.mp3
Stoppped Scheduler Name Scheduler Description Local 2 15 04-ManuChaoRaininInParadize.mp3

Figure 2.44 - Manage Playlists card of the Info Channel window

Upload Playlist

Click on the Upload Playlist tab. The related card appears. It has a unique section : "Playlist Parameters".

This card allows to store in the HMS-130 unit the playlists contained in zip compressed files.

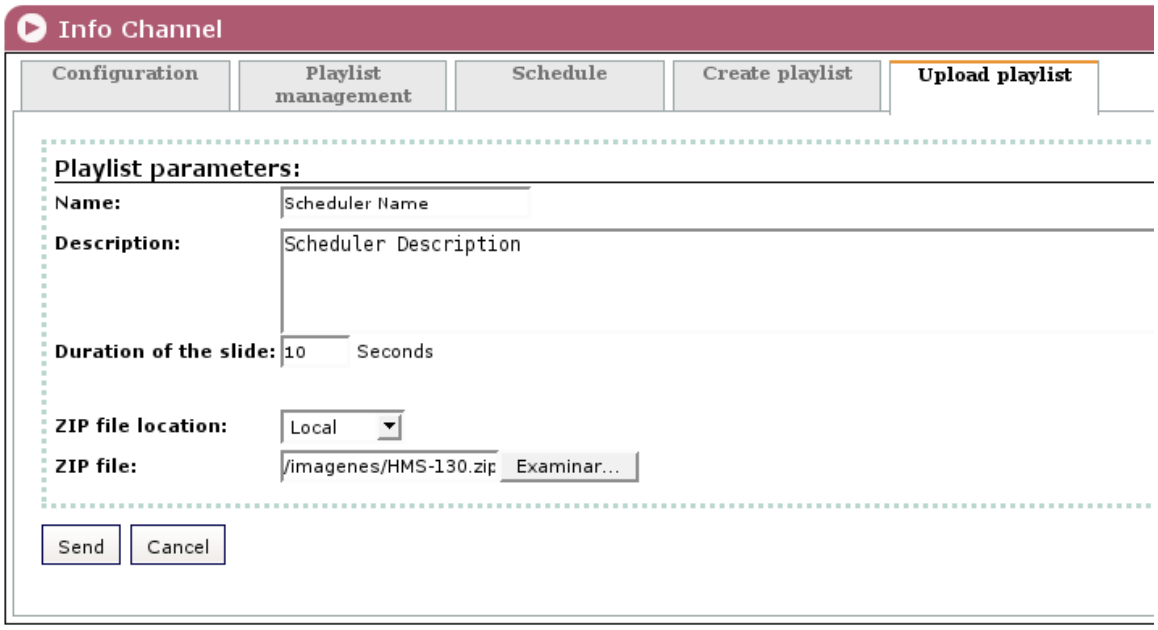


Figure 2.45 - Upload Playlist card — Local ZIP

The unique, "Playlist Parameters" section has 5 fields :

"Name" : Enter the name you want to assign to the playlist that you are going to create from the zip file that you are going to upload.

"Description" : Describe the playlist using the name entered above or a wider expression if desired.

"Duration of the slide" : It is the duration that will have each one of the slides contained in the zip file. The predetermined duration appears by defect. Change it if you want.

"ZIP file location" : Select from the dropdown list the location (local or external) of the zip file.

The fifth field is different depending on what was selected in the fourth one: local or external. If the location is local (i.e. hard disk), the "ZIP file" field appears (Fig. 2.45) :

"ZIP file" : Select the file from the dropdown list, as usual. Then click on the *Send* button: the playlist contained in the zip file is incorporated to the table of the "Manage Playlists" card.

If the location is external, the field that appears is "ZIP File Path" :

"ZIP File Path" : The file will be in a http or ftp server. Type the complete URL address. Then click on the *Send* button. The new playlist is incorporated to the table of the "Manage Playlists" card.

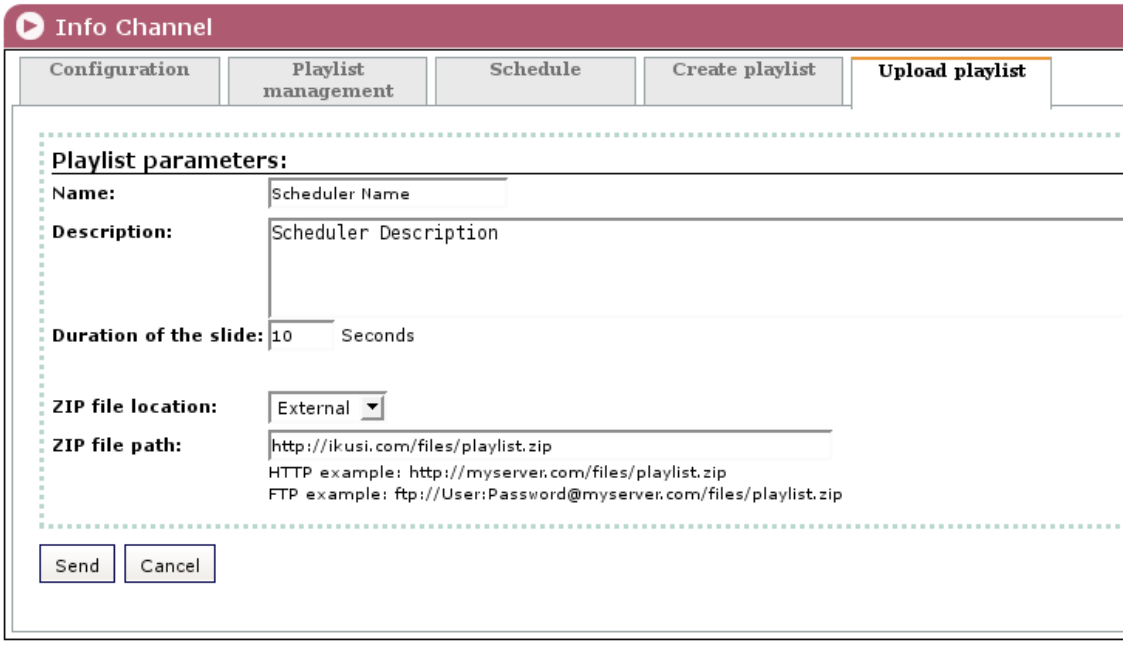


Figure 2.46 - Upload Playlist card — External ZIP

Playlist Scheduler

The purpose of playlist schedules is to broadcast —on preset time and date and with preset duration— chosen playlists among those stored in the HMS-130 unit.

Click on the Scheduler tab. The related card appears :

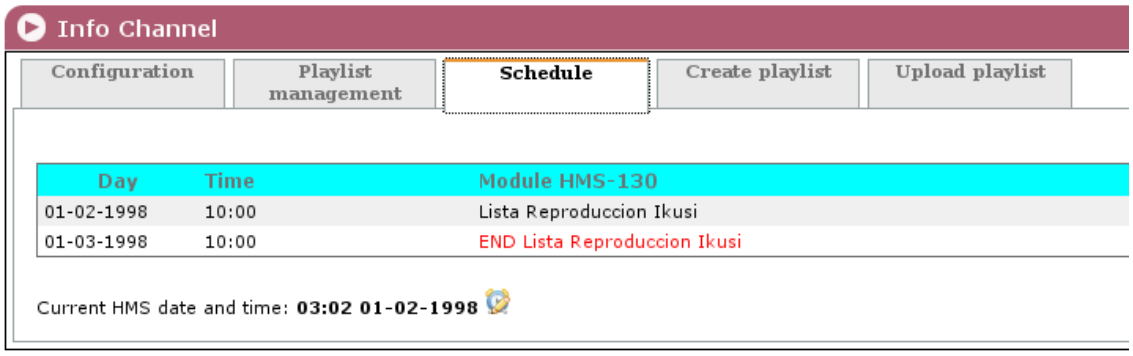


Figure 2.47 - Scheduler card of the Info Channel window

The process of creating playlist schedules is similar to that explained por OSD schedules (page 40). On the left-hand menu of the general program screen, click on the *Headend → Scheduler*. The Scheduler window is displayed :

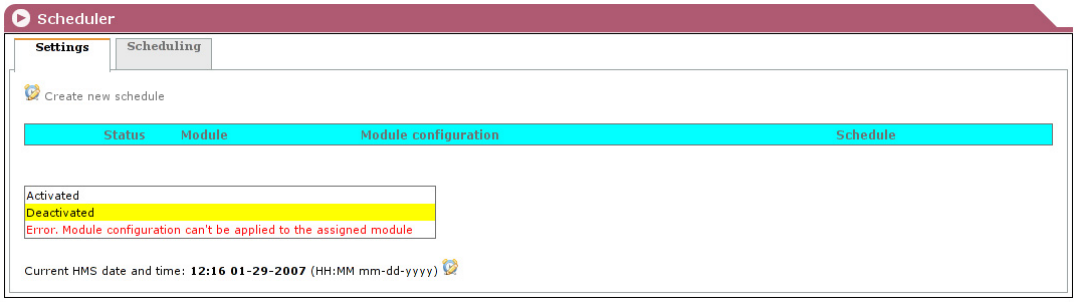


Figure 2.48 - Playlist Scheduler (I-a)

The Settings card of this window shows the schedules currently stored in the HMS unit. In the figure, none exist yet. To create a schedule of a playlist, click on "Create new schedule". A form is displayed in the same area of the window (see Fig. 2.49 on the next page):

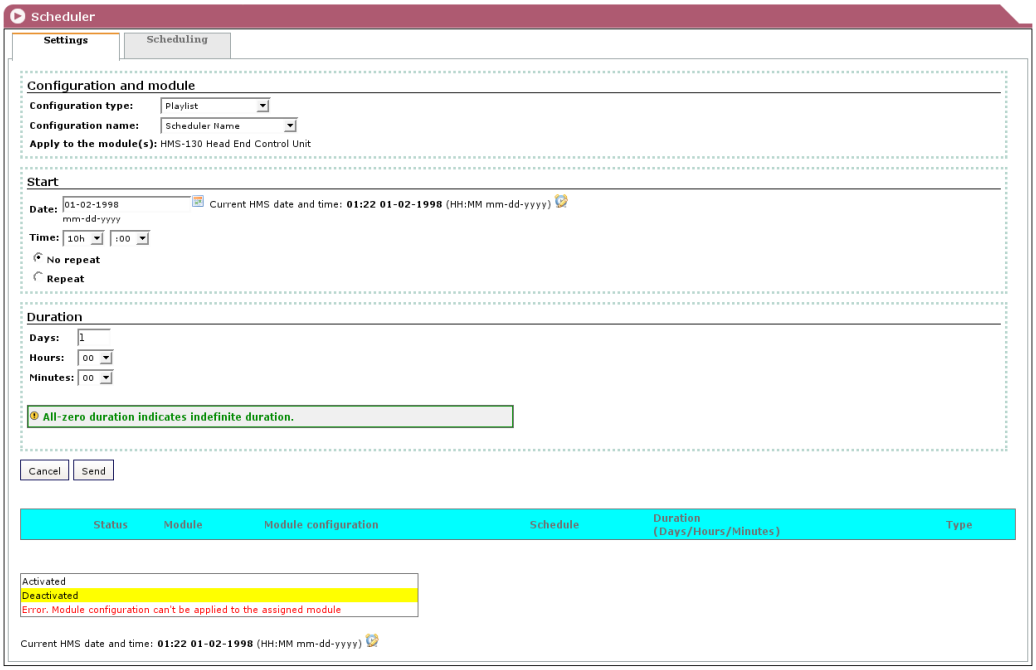


Figure 2.49 - Playlist Scheduler (I-b)

Fill in the two fields existing in the Configuration and Module form:

"Configuration type": Select Playlist from the dropdown list.

"Configuration name": Select the name of the desired playlist for scheduling.

Next, fill in the Start section :

Start "Date" and "Time": Enter the date and time as of which the playlist will be broadcasted.

"No repeat" / "Repeat": Refers to not endow or endow with periodicity the broadcasting of the playlist.

Fill in the Duration section :

"Days", "Hours" and "Minutes" : Enter the desired duration of the playlist.

Finally, fill in the Repeat Pattern:
(Note : This section does not appear if you selected "No repeat" above)

"Repeat": The frequency with which the playlist appears.

Once you have completed all of the sections, click on *Send*. The form disappears and the window displays the list of existing schedules (as Module's as OSD's as Playlist's), which will include the one that you have just created (see Fig. 2.29 on page 42).

Chapter Three - Submitting Reports

In this Chapter

- Alarms log
- Traffic in the IKUSUP Bus
- HMS Internal Temperature
- GSM Signal Reception Level
- System Logs

Alarms log

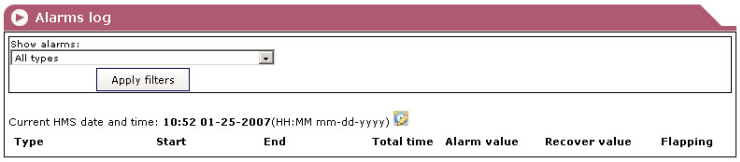


Figure 3.1 - Alarms Log window

Traffic in the IKUSUP Bus

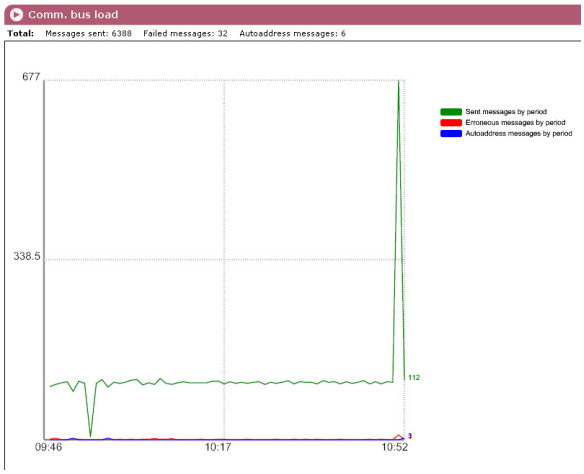


Figure 3.2 - Traffic in the IKUSUP Bus window

HMS Internal Temperature

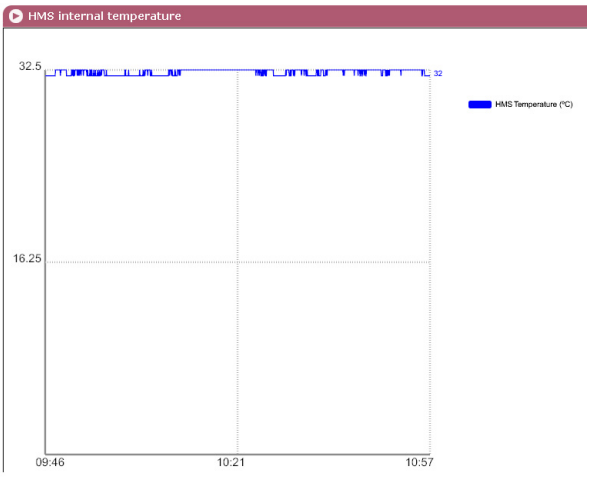


Figure 3.3 - HMS Internal Temperature window

GSM Signal Reception Level

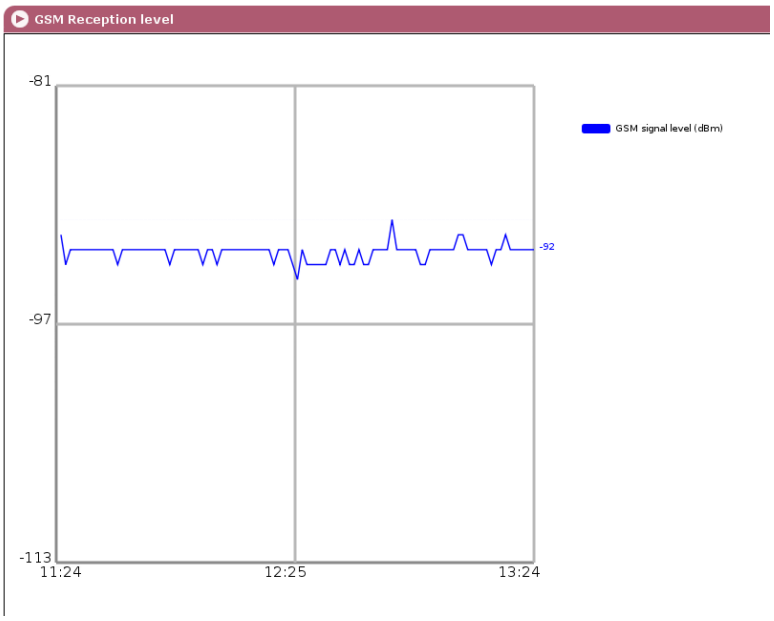


Figure 3.4 - GSM Signal Reception Level window

System Logs

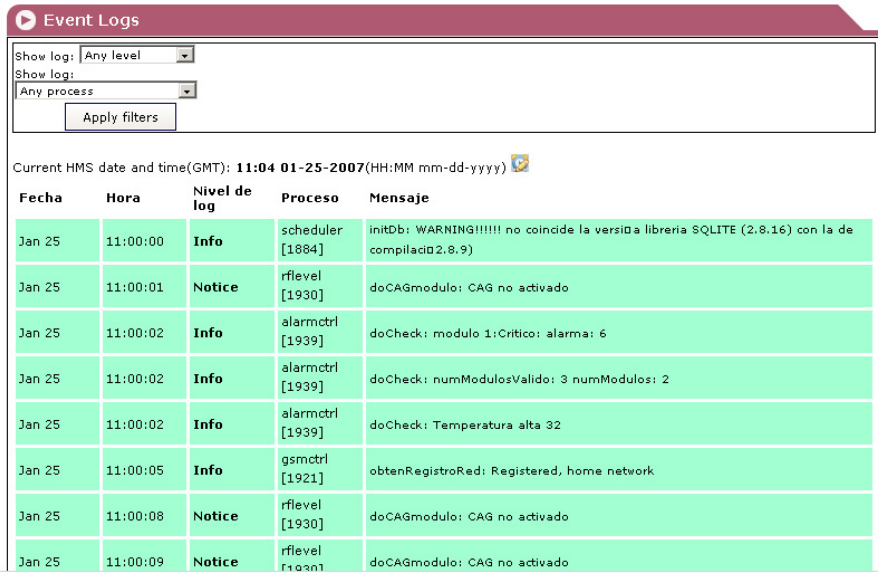

Event Logs
Show log: Any level
Show log:
Any process
Apply filters
Current HMS date and time(GMT): 11:04 01-25-2007(HH:MM mm-dd-yyyy)
Fecha
Hora
Nivel de log
Proceso
Mensaje
Jan 25 11:00:00 Info scheduler [1884] initDb: WARNING!!!!!! no coincide la versi□a libreria SQLITE (2.8.16) con la de compilaci□2.8.9)
Jan 25 11:00:01 Notice rflevel [1930] doCAGmodulo: CAG no activado
Jan 25 11:00:02 Info alarmctrl [1939] doCheck: modulo 1:Critico: alarma: 6
Jan 25 11:00:02 Info alarmctrl [1939] doCheck: numModulosValido: 3 numModulos: 2
Jan 25 11:00:02 Info alarmctrl [1939] doCheck: Temperatura alta 32
Jan 25 11:00:05 Info gsmctrl [1921] obtenRegistroRed: Registered, home network
Jan 25 11:00:08 Notice rflevel [1930] doCAGmodulo: CAG no activado
Jan 25 11:00:09 Notice rflevel [1930] doCAGmodulo: CAG no activado

Figure 3.5 - System Logs window

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